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Trans. Dirs.
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In presenting this bulletin to our members, we are continuing the Newton papers that have contributed so much in tracing the early growth of the C. B. & Q. R. R., together with the material contributed by Mr. C. F. H. Allen on the Railroads in McKean County, Pennsylvania.

As promised in Bulletin 78, the locomotives of the Panama R. R. that were to be published in a subsequent issue appear herewith. This list is based chiefly on the records of the locomotive builder in the absence of the records of the corporation. We grant at the outset the possibility of errors. For example, opposite page 32 of Bulletin #78 appears an illustration of a Rogers 4-4-0, said to be the #19 with the pay cars at Gatun. The #19, with the others of that group were of the 0-6-0 type. There is a trace of evidence that she was rebuilt by Baldwin to the 4-4-0 type, which seems unlikely. From the photograph, the chances seem to be that she was converted to the 4-4-0 type by the road, in their own shops. Whether there are similar cases, we cannot state, but, the record of these locomotives is made up from the records of their builder, what the road did with them afterwards, we are unable to state.

We welcome Mr. R. V. Dodge to our publication with his interesting contribution on the California Southern, a road that meant so much to San Diego, his home city and one that had so many difficulties in getting started. Lastly, Mr. F. Stewart Graham has contributed some interesting notes on a little known road in the Green Mountain State. We sincerely hope that you will enjoy all of these contributions.

Letters to the Editor

4 St. John's Road, Cambridge, England
Sir: Jan. 9, 1950.

Now that your correspondent, Mr. R. R. Brown, has started the ball rolling with regard to the caption under the lower photograph facing page 36 of Bulletin No. 76, it may perhaps be worth while to roll the said ball a little further.

I have in mind more particularly a well-integrated system, some 13,000 miles in length, all 3′ 6″ gauge, over which run corridor, dining and sleeping cars; where some of the regular through trains run a distance of more than 1,300 miles and where some expresses cover 970 miles in 26 hours, including stops; where passenger locomotives of 185 tons and switching locomotives of 130 tons are in daily use. And what is more, this particular system is comparatively young and is a growing concern and is not a survivor of a bygone age. But I leave it to the sleuths among your readers to run to earth the location of this road.

It has probably never struck your readers that a large and growing part of the world's railroad mileage is narrow gauge, economy of construction, of equipment and of running being the original motive. In India nearly half the mileage is meter gauge, while in Japan, New Zealand, Queensland, Tasmania, Indonesia and several other countries the 3′ 6″ gauge is standard. Of the countries named, the only one which is likely to convert its gauge to 4′ 8½″ is Queensland, in order to conform with the gauge in the other Australian states.

Yours faithfully

C. A. Branston

Prior to the publication of our Bulletin #79, Mr. F. Achard upon learning of the subject of this bulletin sent some very interesting comments as well as some data on the Norris locomotives. His comments were in connection with the distribution of the Norris product as shown in Appendix 6. On the whole, they agree pretty much with those of the author save that Mr. Achard listed the individual names and construction numbers of many of these locomotives. The additional construction numbers can be listed as follows: To the K. F. Nordbahn, the "Columbus" was #112; "Virginia" #135 and "Florida" #134. To the Nordliche Staatsbahn-Austria, the "Budweis" was #171; "Teplitz" #172; "Calsbad" #174 and "Eger" #175 and on the Wien-Raab, the "Baden" was #82.

One thing more and it concerns the illustration of the "General Gourgaud," Fig. 14. This print, since it was better than the one furnished by the author, was done so upon the assurance of some one in this country, who was supposed to know, that this was the model locomotive that Norris built for the King of France. Mr. Achard, in his list, places a locomotive of this name on the Montpellier-Nimes Railway and, if this is so, then we were in error in crediting this locomotive as the model that Norris built for the king. However, the Norris paper as presented by Mr. Dewhurst is one that should provoke an interest and stimulate further research in this country.

New Books

Pioneer Railroad: The Story of the Chicago and North Western System, by Robert J. Casey and W. A. S. Douglas, 334 pages, 9x6, illustrated, bound in cloth. Published by McGraw-Hill Book Company, New York, N. Y. Price $4.00.

This book was published to commemorate the one hundredth anniversary of the Chicago & North Western Ry. It was the Galena & Chicago Union R. R. that was the first railroad to built west from Chicago and was the owner of the famous locomotive—"Pioneer." Founded by William Butler Ogden, first mayor of Chicago, the road was intended to be built to Galena on the Fever River, a tributary of the Mississippi River. In 1864 the Galena & Chicago Union was consolidated with the Chicago & North Western, the name of the latter being retained, perhaps for reason of economy and, in this way, the C & N W lays claim to being the pioneer railroad, west of Chicago. Expansion was inevitable and it was the late Marvin Hughitt that guided its destinies for many years and made it one of our outstanding railroads in the west and north west. It forms an important link in the chain of railroads making up the "Overland Route" and it has its own lines to the northwest. It has always been well and conservatively managed.

So much for the road but with all due respect to the authors, it would appear that either they or the proofreaders were careless. The "Pioneer" on page 58 weighs 10 tons but on the next line it weighs 24000 lbs., unless those were long tons as some times reported. The official roster of the G. & C. U. gives the weight as 10 tons. The few maps are generally too small and there is a lack of documentation for many important points and a very small bibliography that raises serious doubts as to its authenticity. The book is readable and romantic but this does not constitute good railroad history. To the mind of the reviewer it is sort of a combination love novel, swathed in coal and shot out the stack in the form of black smoke. That fine railroad in the northwest deserves a much better history than this and it is to be hoped that some time in the future some one with the time and the technical "know how" will prepare it.

Simon Cameron's Adventures in Iron, by James B. McNair, 160 pages, 8½x5½, illustrated, bound in cloth. Published by the author, 818 South Ardmore Ave., Los Angeles (5), California. Price $3.85.

Simon Cameron, first Secretary of War in the cabinet of Abraham Lincoln, was a political and financial genius as well as a rather colorful figure. The book however covers the period from 1837-1846. Based on letters and documents either written or signed by Cameron and in the possession of the author, the book gives an excellent account of the tribulations of the early iron masters in Pennsylvania, some of its products went to the first railroads of that state. McNair, his partner, like Cameron, was a native of Pennsylvania and of Scotch descent. Unlike Cameron, he was honest and upright and died a poor man. Cameron became one of the richest men of his time living until he was ninety. "There exists throughout the State (of Pennsylvania) an almost uni-

versal belief that his fortune has been acquired by means that are forbidden to the man of honor. There stand upon the records of the courts, and but a very few years old, charges that would, if proved, involve the commission of serious crime. Most of our well-disposed fellow citizens look upon him as the very incarnation of corruption.'' Such were the words of Henry C. Carey, of Philadelphia, written January 7, 1861 to President Lincoln.

Narrow Gauge Railways in America, by Howard Fleming, 101 pages plus index, 8½x5½, illustrated, bound in cloth. Published by Grahame Hardy, 2046 East 14th St., Oakland (6), Cal. Price $5.00.

In 1876, Howard Fleming tried to prove that railroads, narrower than standard gauge could be built more cheaply and operate with more economy than those of standard gauge. Furthermore, they could go places that no standard gauge locomotive would dare run. With his opinions, we have no quarrel, we only point out, as an aftermath, that most of the first economy resulting from narrow gauge construction and operation is offset by transfer charges of freight at standard gauge points. Despite this, his arguments, seventy-five years after they were written are of historical interest.

The publisher has done a fine piece of work and the illustrations of E. S. Hammack have added much to the interest and value. In the appendix are a series of illustrations of narrow gauge equipment and some advertisements of locomotive and car builders of the period. There is also a directory of narrow gauge railways, by states, giving the gauge, termini, mileage, date built and date if altered to standard gauge. This is followed by a supplementary list of lumber, logging or industrial roads and here, those listed under Massachusetts should be credited to Mississippi. In view of the present interest in our ''slim gauge'' roads, this book is a noteworthy addition to that field.

Handcar Joe, by Gar Voss, a Wayne feature, 9x6½, illustrated. Published by Wilcox & Follett, 1255 South Wabash Ave., Chicago (5), Ill. Price $1.00.

Handcar Joe was the Paul Bunyan of the early American railroads. No job, whether it was holding a bridge in place for a passing train, or towing back a wild barge in the Misssisippi or rolling up a mile or so of track to replace that stolen by the Indians was too big or difficult for this character to handle. If you wish to learn how our early railroads were built, here is your opportunity and altho' intended for your children, the chances are that you will get considerable enjoyment from the pages and the illustrations.

Interurbans of the Empire State, 46 pages, 8½x5½, price 60c, and Toonervilles of the Empire State, 38 pages, 9x6, price 50c, both by Felix E. Reifschneider, P. O. Box 774, Orlando, Florida. Distributed by the author.

Both of these publications deserve mention in that the author has preserved much in the way of history that has long since been forgotten. During World War I your Editor lived in Rochester, N. Y. and here

he saw the big red interurbans of the Rochester, Lockport & Buffalo, the green interurbans of the Rochester & Syracuse fashioned like a N. Y. C. coach of the period and, twenty years ago, everyone going from Albany to Schenectady took the high speed line serving those two cities. Yes, some of us looked down on the interurbans years ago but who would not patronize them today in preference to a bus! Both, neatly printed with the offset method and illustrated, the author deserves a lot of credit for preserving the history of these interurbans in such concise fashion. If you are interested in the subject, the editions are both limited and you should order your copies from the author without further delay.

The California Southern Railroad

A RAIL DRAMA OF THE SOUTHWEST

By Richard V. Dodge

R. P. Middlebrook, Assisting

"Where rail and tide meet, there cast anchor."

Such was the motto of the citizens of new San Diego after the completion of the California Southern Railroad. While hopes sprang eternal, the casting of commercial anchors ever failed to come up to expectations.

San Diego Bay was admittedly the finest harbor south of San Francisco, but it lay dormant for years for the lack of rail transportation. The struggles of the bay communities to secure a rail connection with the rest of the country, followed a sine curve, with hopes raised to the heighth of expectancy one moment, only to be plunged into the depth of despair the next. The situation at times became exceedingly complex and involved bitter battles between the Santa Fe and the Southern Pacific for control of Southern California's traffic. In this article the attempt is made merely to record historical facts, there being no intent to cast aspersions against the present managements of these two railroads, whose policies today, are very different from those of its predecessors.

Probably the best way to give the reader a comprehensive picture of the historical background of the railroad situations as they developed is to begin with a chronological outline of pertinent events.

CHRONOLOGY

A. D. 1542—Juan Rodriguez Cabrillo, an explorer, in the service of Spain discovered San Diego Bay. He named the area "San Miguel."

1602—Don Sebastian Viscaino surveyed the locality and changed the name to *San Diego de Alcalá*, in honor of a Franciscan friar, Saint James, of the town of Alcalá in Spain.

1769—An expedition was organized in Baja California, about one hundred fifty miles south of San Diego, by José de Galvez, "visitador general," to colonize Alta California. Under command of Don Gaspar de Portolá and accompanied by Padre Junípero Serra, a detachment arrived at old San Diego, settling on Presidio Hill. This was the beginning of civilization on the west coast of the United States, the "Plymouth Rock" of the West.

1832—The flag of Mexico replaced the Spanish emblem.

1846—War broke out between the United States and Mexico. The Stars and Stripes were raised on Presidio Hill. General W. H. Emory made a report on the excellence of San Diego harbor as a railroad terminus.

1847—The first census credited San Diego with 254 persons, exclusive of "tame" and "wild" Indians.

1848—Marshall's discovery of gold in Northern California started a flood of migration to the West. A railroad to the Pacific became a military necessity.

1849—The boundary between the United States and Mexico was surveyed by Andrew B. Gray.

1850—California was admitted to the Union as a "free" state. An abortive attempt was made by William Heath Davis and A. B. Gray to establish "New Town" on the bay four miles south of Old San Diego, or Old Town as it soon came to be called. The New Town area is bounded by the present Broadway, Front Street and the shore line of the bay. The undertaking was soon known as "Davis' Folly."

1853—Congress authorized reconnaisance surveys for railroad routes from the Mississippi River to the Pacific Ocean, on the 32nd, 35th, 42nd and 48th parallels of latitude. The 32nd parallel route was considered the most practicable and was backed by the then politically powerful Southern States. The latitude of San Diego is 32 degrees-42 minutes.

THE FIRST PAPER RAILROAD

SAN DIEGO AND GILA, SOUTHERN PACIFIC AND ATLANTIC RAILROAD

1854—The progressive citizens of old San Diego organized the bombastic San Diego and Gila, Southern Pacific and Atlantic Railroad Company to build from San Diego to Fort Yuma to meet the line which might reach that point from the east, presumably the Texas Western or its successor the Southern Pacific Railroad of Texas.

1855—Eight thousand eight hundred and fifty acres of Pueblo lands along or near the bay front were donated to the SD&G, SP&ARR. With this donation legal entanglements commenced. A. B. Gray made a report to the Texas Western's stockholders, estimating the cost of the whole road to San Diego at $44,470,000.

1856—Gray surveyed the route for the SD&GSP&ARR from San Diego to the Colorado River via Warner's Pass.

1861—The Civil War stopped all railroad ventures including the SD&GSP&ARR.

Before proceeding to the Post Civil War developments, it seems desirable to interrupt the chronological outline to review the formation and growth of the railroad corporations which are to play important parts in our story.

THE CENTRAL PACIFIC RAILROAD

With the slavery question out of the way, Congress authorized the building of the Pacific Railroad on the 42nd parallel, the bill being signed by President Lincoln on July 1, 1862.

The western end was constructed by the Central Pacific Railroad, which had been organized by four merchants of Sacramento, California: Collis P. Huntington, Leland Stanford, Charles Crocker and Mark Hopkins, none of whom had had previous railroad experience. The group, of which Huntington was the mastermind, soon became known as the "Big Four."

The road was built from Sacramento east, and, as construction proceeded, competition was eliminated, either by purchase or by forcing the rival out of business. First, the original California Central was

sold to the Central Pacific in 1864. In the same year the Sacramento, Placer and Nevada Railroad was forced out of business. The Sacramento Valley Railroad was sold out in 1865, and the original Western Pacific franchise, the line from San Jose to Sacramento, was repossessed in 1866.

Earlier the "Big Four" had acquired the local lines in Oakland and Alameda and, after the driving of the golden spike, May 10, 1869, entrance to the San Francisco bay region was effected by extending them to Niles on the former Western Pacific. The California Pacific, built from Vallejo to Sacramento, was taken over in 1871.

Next, Huntington and his partners turned their attention to the establishment of a railroad monopoly in the State of California. This is how the plan developed:—

THE FIRST SOUTHERN PACIFIC RAILROAD OF CALIFORNIA

One of the early railroads of central California, over which Huntington and his partners did not have control, was the San Francisco & San Jose Railroad Co., which had been completed to San Jose in January 1864.

The following year the Southern Pacific Railroad Company was incorporated in California by Peter Donahue and Henry Newhall of the San Francisco & San Jose Railroad, to build a line from San Jose down the coast to San Diego to meet the 32nd parallel road.

A short time later the proposed route was changed to cross the Coast Range through Pacheco Pass, thence up the San Joaquin Valley to form a link in another transcontinental line, the Pacific end of the contemplated 35th parallel route. When construction work was well under way south of San Jose towards Gilroy, Huntington was stirred into action and bought out the Donahue interests. A reorganization quickly followed.

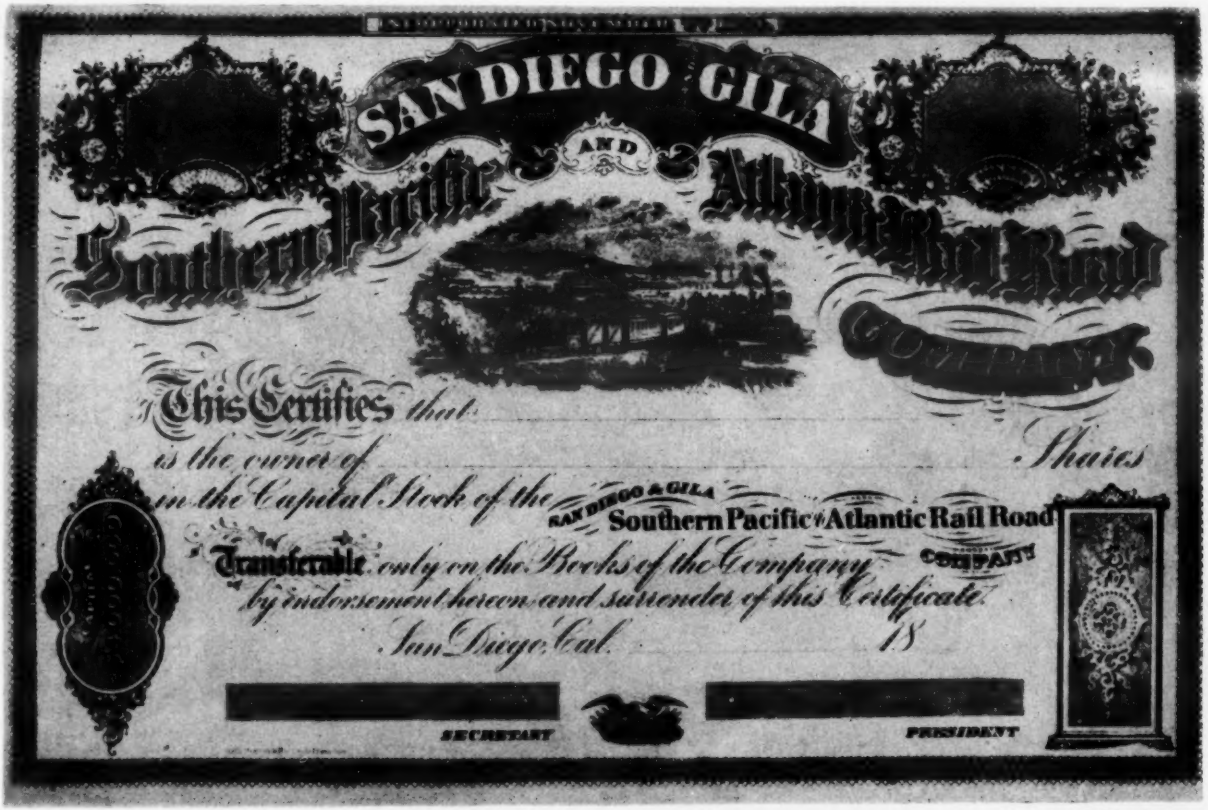
SOUTHERN PACIFIC RAILROAD OF 1870

Notice of the consolidation of the Southern Pacific Railroad, the San Francisco & San Jose Railroad, the Santa Clara & Pajaro Valley Railroad and the California Southern Railroad [1] was dated October 12, 1870. The companies were amalgamated under the corporate name of Southern Pacific Railroad Company.

Early in 1871 newspaper editorials warned that the Central Pacific, meaning the Huntington interests, had laid plans for a monopoly to control the whole state. Four routes were proposed, which, if built, would complete the strangle hold. One—from San Francisco to San Diego via the coast or San Joaquin Valley; San Diego was specified as the terminus of the Southern Pacific. Two—from Stockton south to Los Angeles. Three—from Marysville north to the Oregon line and Four—from Santa Rosa north to Humboldt Bay.

Thus was hatched the multi-tentacled monster which newspaper artists later cartooned as the *Octopus*. This Central Pacific-Southern Pacific combination is the "bad boy" of our story.

[1] No connection with the principal of our story.



Courtesy of John Davidson

Reproduction of a stock certificate of the San Diego & Gila and Southern Pacific and Atlantic R. R.

Courtesy of R. P. Middlebrook

Francis A. Kimball, founded National City in 1868 and contracted for the California Southern R. R. Born 1932, Died 1913.

ATCHISON, TOPEKA AND SANTA FE RAILROAD

During the same period, a Pennsylvania lawyer named Col. Cyrus K. Holliday, decided to do some pioneering in the Territory of Kansas. He established a village, which was named Topeka and organized a company to build a railroad from Atchison to Topeka. Before he realized the latter ambition, Kansas became a state and the Civil War interfered with all railroad activity. All the while, his visions of a great railroad empire kept broadening.

Going before Congress in 1863, he was granted a charter with land grants for a railroad from Atchison across Kansas to the Colorado line "in the direction of Santa Fe." Consequently, the name of the organization was changed to Atchison, Topeka & Santa Fe Railroad Company, Holliday becoming its first president.

The difficulty of obtaining capital was but one of the many obstacles that hindered construction. The building of the first section from Topeka west was barely under way in 1869. By the time it was placed in operation, Holliday was able to interest a group of Boston financiers in the project and they took over the management, moving the headquarters to Boston.

Construction was pushed across the state and the revised Colorado line was reached in December 1872, just in the nick of time to save the land grants, which, incidentally, were rather small compared to those given to the Central Pacific.

This, then, is our hero, but one with a dual personality in so far as the citizens of San Diego were concerned.

Next the 35th parallel railroad should be considered as it later played a determining role in our story.

ATLANTIC & PACIFIC RAILROAD (Original Company)

In 1866 Congress granted a charter with land grants to the Atlantic & Pacific Railroad to build from St. Louis, Missouri, to Albuquerque, New Mexico, thence via the 35th parallel route to the Colorado River and the Pacific Coast. The original land grants, based on twenty sections per mile in States and forty sections per mile in Territories, amounted to some 42,000,000 acres. The charter also contained a rider, a clause authorizing the Southern Pacific Railroad of California, the first corporation of that name, to connect with the Atlantic & Pacific at the California boundary.

By 1871, the original Atlantic & Pacific Railroad, by means of a lease of the Pacific Railroad of Missouri, consolidation with the South Pacific Railroad and with new construction, had extended its line west from St. Louis, 364 miles, to Vinita in the Indian Territory, now Oklahoma, where construction stopped due to the failure of the Government to extinguish the titles to the Indian lands.

Having described the railroad corporations which became the actors on our stage, let us trace the contemporaneous events in the southwest corner of the United States.

FOUNDING OF NEW SAN DIEGO AND NATIONAL CITY

A San Francisco merchant named Alonzo E. Horton, in 1867, attended a lecture and became so impressed by the glowing descriptions of San Diego Bay that he decided to investigate. Arriving by steamer, he was landed at a point near what is now Pacific Highway and Market St. While waiting for a rig to take him to old San Diego, he looked over the acres of cactus and sage brush, marvelled and said to himself: "This is the finest site for a city I have ever seen."

Quickly he arranged for a public auction and bought nine hundred acres of Pueblo Lots, including all the heart of the present city, at an average price of twenty six cents an acre. This sub-division is known as *Horton's Addition.* He started a number of structures, including a wharf at the foot of Fifth St., and gave away lots to anyone who would build. This was the birth of new San Diego.

The following year another San Franciscan moved south—for his health. His name was Francis A. Kimball. In partnership with his brothers he bought the entire *Rancho de la Nacion,* or National Ranch. He sub-divided, platting National City on the bay four miles south of new San Diego. All agreed that a railroad was needed to develop commerce and build a great sea port.

MEMPHIS, EL PASO & PACIFIC RAILROAD

At that same time, pathfinder General John C. Fremont was trying to promote the old Memphis, El Paso & Pacific project under the charter as amended in 1856, to build on the 32nd parallel. Both Horton and Kimball, among others, joined in the scheme. A route directly east from San Diego to Fort Yuma, via Jacumba Pass or Carriso Gorge, was surveyed by General Thomas S. Sedgwick and the franchise of the San Diego & Gila, Southern Pacific & Atlantic Railroad was taken over.

Since Congress failed to approve Fremont's application for subsidies, he was unable to finance construction and the contracts were cancelled. The scheme ended in ignominious failure with Fremont being characterized as the "greatest railroad humbug."

Several other railroad schemes were projected about this time. These included the San Diego & Los Angeles Railroad Company, which surveyed a route between the cities in 1870, and the San Diego & San Bernardino Railroad Company, on which some grading was actually done in 1871. The plans were that the latter road would connect at San Bernardino with the Utah Southern, the proposed extension of Brigham Young's Utah Central south from Salt Lake City. There was also General Palmer's grandiose plan for extending the Kansas Pacific to San Francisco via Walker's pass, with a branch to San Diego from a point on the line west of the Colorado River.

THE TEXAS PACIFIC RAILROAD

Starting in 1870, another attempt to build on the 32nd parallel was made under the name of The Texas Pacific Railroad Company. In effect this was a new corporation formed to take over the rights and the assets of the Southern Pacific Railroad of Texas and the Memphis, El Paso &

Pacific Railroad and their offspring, the Southern Transcontinental Railroad. Colonel Thomas A. Scott, president of the Pennsylvania Railroad, soon became head of the enterprise.

Scott went before Congress for a charter and land grant. The act was passed on March 3, 1871. The next year the corporate name was changed to The Texas & Pacific Railway Company. Amended in 1873, the charter required that a railroad be built from Marshall, Texas, to the ship channel in San Diego bay by the most direct and eligible route via the 32nd parallel, all the way in American territory. San Diegans succeeded in adding the requirements that the Company should commence construction simultaneously at San Diego and Marshall and prescribed the minimum amounts of construction. The track gauge was specified to be five feet. Huntington also obtained the concession that the Southern Pacific could connect with the Texas & Pacific at any point in California fifty miles or more east of San Diego.

With the president of the powerful Pennsylvania Railroad at its head, with a Congressional charter with land grants, this had all the appearances of being a bona-fide proposition. All the San Diego lands previously donated to the San Diego & Gila, Southern Pacific & Atlantic Railroad were deeded ultimately to The Texas & Pacific Railway Company.

Four surveys were run in Southern California and it was a great disappointment to San Diegans when Scott formally announced, in May 1873, that a northerly route via Temecula and San Gorgonio passes had been selected. Ground was broken, A. E. Horton turning the first sod, and ten miles of road bed were graded through the City of San Diego.

THE LOS ANGELES ELECTION

During this period Huntington's Central Pacific-Southern Pacific combination had built south through the San Joaquin Valley, heading for Tehachapi Pass.

In mid-1872, Huntington, through the agency of Stanford & Company, made a proposal to the people of Los Angeles County that the Southern Pacific would build a total of fifty miles of main trunk line north and east from the Plaza in Los Angeles, the city having a population of about 10,000, if granted an absolute donation of a subsidy of 5% of the assessed value of property in the County and some $225,000 worth of bonds of the Los Angeles & San Pedro Railroad which the County owned. 5% was soon computed to be about $525,000. To gain the support of the southern part of the County, a branch line to Anaheim was promised.

Much opposition developed to the granting of the subsidy. Huntington was adamant and the railroad would make no concession, arguing that an alternate route from Tehachapi through the Cajon and San Gorgonio Passes would give the shortest distance to the east and would reduce the mountain work.

Scott countered by advocating that a railroad be built from Los Angeles to connect with the Texas & Pacific at its San Diego terminus

for the same subsidy. An election was held in November, to decide the issue. Huntington won.

Following the election, the Southern Pacific acquired the Los Angeles & San Pedro Railroad, which had been opened in 1869, the first railroad in Southern California.[2]

THE PANIC OF 1873

With the failure of the investment-banking firm of Jay Cooke & Co. on Thursday, September 18th, the "Black Friday" in Wall Street and the following depression, Scott, who was then soliciting European support, could not continue to finance The Texas & Pacific. Work stopped, hopes fell and fate had changed the railroad destiny of San Diego.

Scott made efforts to obtain a bond subsidy from Congress in 1876. In this he was assisted by San Diego and opposed by the Union Pacific and Huntington, who told Congress that his Southern Pacific would build the 32nd parallel road without any financial assistance from the government. Again Huntington won.

San Diego then requested that The Texas & Pacific return the nearly 9000 acres of land for failure of consideration, to which Scott readily agreed, but took no action. Reluctantly the city started a lawsuit for recovery.

The financial crisis had repercussions elsewhere. It caused the Atlantic & Pacific Railroad to default on its bonds and the company was thrown into receivership. Likewise, the Missouri Pacific defaulted. Out of these two railroads, in 1876, was organized the *St. Louis & San Francisco Railway Company,* which took over the line built under the Atlantic & Pacific charter to Vinita and the rights of the 35th parallel route. Both the Santa Fe and the Southern Pacific weathered out the storm and continued their expansions. Thomas Nickerson became president of the Santa Fe in 1874, continuing in that capacity until 1880. In 1877 William Barstow Strong was appointed Vice-president and General Manager. He was elected to the presidency in 1881. In Mr. Strong, Mr. Huntington met his match.

As the Santa Fe built west and south, it is interesting to note that it no longer used its own corporate name. Separate companies were organized for each undertaking. Through its subsidiary, Pueblo & Arkansas Valley, the road was opened to Pueblo, Colorado, in 1876 and to the New Mexico line in 1878.

In entering New Mexico, the opposition of Huntington was first felt. He had had adverse laws passed. These were artfully circumvented and soon the New Mexico & Southern Pacific Railroad was building south over Raton Pass, reaching Albuquerque in 1880.

In California, Huntington's line had surmounted the Tehachapi Pass with Engineer William Hood's famous loop and was opened to

[2] See Bulletin No. 55.

In Temecula Canyon, "huge, beetling crags overhang the road."

Courtesy of R. P. Middlebrook

Courtesy of R. V. Dodge

Shops, roundhouse and water tank built by California Southern R. R. in 1881, taken in 1887. Nearest locomotive is Los Angeles & San Gabriel Valley R. R. No. 1, renumbered CSRR No. 18. (Round house and water tank are still in service).

Courtesy of R. P. Middlebrook

Original Krupp 1881 rail still in service in a spur track at San Diego in 1948.

Mojave [3] in 1876. Upon completion of the long tunnel at Newhall, Los Angeles was connected by rail with San Francisco the same year.

The promised roads east to Spadra, near Pomona, and south to Anaheim had been constructed. The Anaheim branch was extended to Santa Ana.

The Los Angeles & Independence Railroad, which had a line in operation from Santa Monica to Los Angeles, was purchased by the Huntington interests in 1877. The "Independent" road had done considerable construction of grade in Cajon Pass in 1875.

The building of the trunk line to the east was continued to the new town of Colton, midway between San Bernardino and Riverside, much to the disappointment of those towns, both having aspired to be on the main line. On through San Gorgonio Pass, across the desert, over The Texas & Pacific route, the track was pushed to the Colorado River. The river was bridged and the line was opened to Yuma in 1877. There being no Texas & Pacific at Yuma to stop it, construction went on towards the east through the Territory of Arizona and the Southern Pacific became the 32nd Parallel railroad. Huntington had offered to extend the Southern Pacific indefinitely for the land subsidy. This proposal was fought vigorously but to no avail by Scott.

This prologue has brought to the reader a summary of the railroad developments in the southwest up to the late '70's, at which time San Diego was still without rail connection, in fact, was practically without hopes of one.

MR. KIMBALL GOES TO BOSTON

Not disheartened by the adverse events, Frank Kimball was determined to do something. Kimball was described as most charitable, "small in stature, but when he puts his shoulder to the wheel, it moves." A railroad committee, composed of prominent citizens of San Diego and National City, was organized. Correspondence with numerous railroad companies produced no results so secret meetings were held in 1879 and Kimball was authorized to make a trip east—to get a railroad.

He went first to Philadelphia to see Tom Scott but there was no hope for The Texas & Pacific at the time. In contacting Jay Gould, the coming railroad tycoon, he is reported to have been given that curt and ultimate answer: "I don't build railroads, I buy them." He called on Huntington in New York without success, though there had been much talk of the Los Angeles & San Diego Railroad extending its line from Santa Ana to San Diego.[4] As a last resort he went to Boston to try negotiations with the backers of the Santa Fe. He was received by President Nickerson and other officials. These financiers had developed plans to reach a Pacific port in Mexico.

[3] Generally spelled *Mohave* at that time.

[4] The Los Angeles & San Diego Railroad Company was incorporated by the Huntington interests October 10, 1876 to cover the branch line from the junction with the Los Angeles & San Pedro Railroad at Florence to Anaheim and the extension in 1877 to Santa Ana. For some time this trackage was known as the "San Diego Division."

SONORA RAILWAY, LTD.

The scheme was to turn off from the line to be built south from Albuquerque at a point near El Paso and head in a southwesterly direction, "through a country of fabled wealth in minerals and grazing land," to Guaymas in the State of Sonora on the Gulf of California. This plan was somewhat disturbed by the insistence of the Mexican Government that the road be constructed north from Guaymas. The Sonora Railway, Ltd.[5] was organized accordingly, to build from Guaymas north to Hermosillo, thence in a northeasterly direction, following the Sonora River valley, through the town of *Ures* and crossing the border near Fronteras and Douglas. Locomotives and other equipment and materials had been ordered for shipment via water, around Cape Horn, to Guaymas.

RESULTS OF THE BOSTON CONFERENCE

Kimball laid his proposals before the directors who became interested when he offered to donate, as part of a subsidy, 10,000 acres of the National Ranch and what could be recovered of the San Diego & Gila, Southern Pacific & Atlantic lands.[6] All probable or possible routes radiating from the bay of San Diego were discussed and compared. The decision was arrived at that the building of the *direct line* from the bay to Ft. Yuma and thence in a northeasterly direction to Albuquerque would complete the Atchison, Topeka & Santa Fe system. Yuma would be the point of delivery to the Southern Pacific and they still hoped for Texas & Pacific.

Bonds were entered into to cover an investigation of the feasibility of extending the Santa Fe's proposed southerly line to a terminus on San Diego bay.

Kimball returned buoyant with hopes. Representatives George B. Wilbur, Lucius G. Pratt and Chief Engineer William R. Morley, the latter of "Royal Gorge battle" fame, were sent out from Boston. Morley reported that there were no serious physical obstacles in the way between San Diego and Yuma, so surveys were started for a line directly east from San Diego, only to be stopped by orders from Boston.

THE NEW ATLANTIC & PACIFIC RAILROAD

Then came rumors that the Santa Fe had decided to join with the St. Louis & San Francisco to form a new Atlantic & Pacific Railroad Company to construct the railroad on the 35th parallel (and share in the land grants). Still stymied in the Indian Territory, the Frisco was not in a position to build west until the Santa Fe reached Albuquerque, crossing its proposed route. In November 1879, the New York Sun stated that the agreement had been ratified and that locomotives, cars and rails for the first two hundred miles had been bought.

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[5] Ferro Carril de Sonora.

[6] The Texas and Pacific Railway still held the deeds to about 8,850 acres. In the hope of expediting a settlement, Scott had been contacted with a compromise proposal that one-half the lands be reconveyed to the Boston company, the other half retained by the Texas & Pacific. Scott agreed but still the desired action was not forthcoming.

In an endeavor to cripple this formidable looking competition Huntington sought to have the Atlantic & Pacific land grants declared forfeited. The decision of the Attorney General, however, upheld the validity.

Engineer Morley was next sent to San Bernardino to look over the possibilities of a route through Cajon Pass, and with Fred T. Perris, who later became the second chief engineer of the California Southern, he camped in a tunnel which had been dug in West Cajon by the Los Angeles & Independence Railroad when its graders were heading for the Owens Valley and the Panamint mines.

As soon as the Southern Pacific learned of this exploration, a surveying party was sent into the pass, with orders to hold it. Morley was not worried, saying that in the pass there was room enough for two railroads; even if there were not, Santa Fe trains would run through there, if it were decided to come that way.

The people of San Diego were bewildered by all these developments, Morley having stated that four surveys were being made through Arizona and, upon completion, it would be determined which route was best.

KIMBALL'S SECOND TRIP TO BOSTON

Under date of February 2, 1880, a historic letter was received from Thomas Nickerson reading, in part, "Decided to build under the Atlantic & Pacific charter to the Colorado River. When money is raised to cover the construction, then it will be decided whether the next move will be to extend to San Diego or some other point or points on the Pacific Coast. When we commenced negotiations with you we felt about certain that we should make connection with the Southern Pacific, but when the Texas & Pacific scheme suddenly was revived to build that road to El Paso and the money subscribed [7] it was evident that this company would be connected with the Southern Pacific and our company left out in the cold, unless we built a parallel railroad for some four hundred miles. Whatever you think about that route, we are satisfied that it is too intensely hot and dusty to ever be a favorite route for passengers." Nickerson went on regretting the disappointments caused, hoping that they should yet build a road to San Diego and asking for four months' extension of time.

The Citizens Railroad Committee was called into session and it was decided to send Kimball back to Boston, mostly at his own expense. This time he was not so cordially received by Nickerson, but after renewing the pledge to the board of directors and adding six thousand acres as a nucleus for a Land & Town Company, it was agreed to form a syndicate for the purpose of entering into a contract for the construction of a railroad to meet the Atlantic & Pacific via the "northern" route.

[7] Huntington and Scott, formerly at loggerheads, had entered into complete understanding, the Southern Pacific to build east to El Paso, the Texas & Pacific to build from Fort Worth to meet it.

THE KIMBALL CONTRACT

The syndicate was composed of Kidder, Peabody & Co., B. P. Cheney, George B. Wilbur, Lucius G. Pratt and Thomas Nickerson, all of Boston, Massachusetts.

The contract, made July 23, 1880, was executed by Frank A. Kimball, representing himself, the firm of Kimball Brothers, the Chamber of Commerce, the board of City trustees and prominent citizens of the City of San Diego.[8]

An amended complaint had been filed by the city against The Texas & Pacific and a judgment rendered February 24, 1880 had awarded to The Texas & Pacific one half of the San Diego lands. The other half was ordered to be transferred to the trustee for the new railroad company.

The subsidy in the Kimball contract totaled $25,000 in cash, over 17,000 acres of land plus 485 city lots together with rights of way and valuable waterfront privileges. By 1907 the value of this subsidy was conservatively appraised in the neighborhood of $10,000,000. Two hundred and twenty five acres were definitely set aside for "work houses, machine shops, warehouses, wharves and other appurtenances," it being intended to make National City the terminus.

In exchange, the syndicate was to build a railroad of standard gauge from the bay of San Diego to a connection with the Atlantic & Pacific in California. The proviso was made that one hundred and sixteen miles should be constructed before January 1, 1882,[9] and the connection with the Atlantic & Pacific completed not later than January 1, 1884.

THE CALIFORNIA SOUTHERN RAILROAD

Articles of incorporation of the California Southern Railroad Company were subscribed to October 12, 1880, the purpose being "to construct, own and operate a railroad for the transportation of persons and property, to be operated by STEAM POWER, from the bay of San Diego in a generally northerly direction to the town of San Bernardino." The place where its principal business was to be transacted was at the city of San Diego.

Benjamin Kimball, of Boston, was elected the first president and Thomas Nickerson the treasurer, the latter soon becoming president.

In order to fulfill the terms of the contract, the California Southern Extension Railroad Company was incorporated in 1881 to cover the construction of the road from San Bernardino to a connection with the Atlantic & Pacific. The routes had not been determined, but it was the expectation that the point would be at or near The Needles.[10]

In short order, construction work was started. Chief Engineer Joseph O. Osgood had arrived and the first grade stake was set at 26th St. in National City. Surveys were made for the "Boston & San Diego

[8] The 1880 census listed San Diego with a population of 2637. National City had 243.

[9] The estimated distance to San Bernardino.

[10] In December 1881, the California Southern Railroad Company and the California Southern Extension Railroad Company were consolidated under the corporate name California Southern Railroad Company. The articles of consolidation were filed January 10, 1882.

Railway'' as the project was facetiously called. Ground was broken for the grading of the first eighteen mile section on December 20, 1880. Locomotives and other rolling stock were ordered in the east, while rails and fittings were purchased in Belgium and Germany, all to be shipped to National City on sailing vessels, around Cape Horn.

During this elapsed time our other players had advanced to the following positions.

Santa Fe—South from Albuquerque through San Marcial—One hundred and two miles.

Atlantic & Pacific—West from Atlantic & Pacific Junction now called Isleta with the Santa Fe south of Albuquerque, and had passed Anzac seventy five miles out. The engineers had crossed the Colorado River near The Needles, leaving no doubt as to the selected route through Arizona.

Sonora Railway—Work had started, New Guaymas had been laid out with streets bearing American names. This caused ''bad blood,'' the Mexicans considering it an insult. They also feared that the new town would divert trade.

Southern Pacific—Its line had reached Deming in New Mexico, eighty miles west of El Paso.

Huntington had announced other plans to checkmate the Santa Fe. One was a line to be built to Guaymas and on to Mexico City. It was to be called the Yuma, Port Isabel and Guaymas Railroad Company.[11]

To the joy of San Diegans, the Los Angeles & San Diego Railroad mortgaged its lands to the Central Pacific. Of course this was to obtain money to cover the cost of building from Santa Ana to San Diego, and the latter city would have two railroads.[12]

MEXICAN CENTRAL RAILWAY

Here another railroad, Mexican Central Railway Company,[13] enters the cast. The same gentlemen committed to the construction of the Santa Fe, the Atlantic & Pacific, the California Southern and the Sonora Railway had become interested in the subsidies offered by the Mexican government for the construction of a standard gauge railroad from Mexico City to El Paso del Norte [14] and articles of association had been signed in Boston. Construction north of Mexico City had been started.

Moving into 1881, the excitement grows intense. Early in the year, the Santa Fe, using the name—Rio Grande, Mexico & Pacific—had completed the road from San Marcial south to Rincon, then southwest to Deming, meeting the Southern Pacific. This connection completed the

[11] Paper railroad only.
[12] Never built.
[13] Ferro Carril Central Mexicano.
[14] Ciudad Juarez, across the Rio Grande from El Paso.

second transcontinental route to the Pacific and through service was started in March from Kansas City to Los Angeles and San Francisco.

On the California Southern, surveys were continued and grading contracts were let. Shops, a round house, yards, water tanks and a wharf were built at National City. Advertisements were placed in the papers reading: WANTED by California Southern Rail Road—50 laborers at $1.75 a day. The bark *James A. Wright,* a four-masted wooden ship, sailed from New York with three locomotives and thirty three cars on April 8th.

THE FIRST LOCOMOTIVE

On June 1st the announcement was made that a large locomotive had been completed and was to come out overland. It had reached San Francisco by the 11th and was loaded into the brig *Orient,* which arrived in San Diego Bay July 9th. The journey had taken fifty days from Boston. The engineer, A. D. Xander, who had messengered the locomotive, stated that the engine had been built by the Providence Locomotive Works, weighed forty eight tons and had cylinders measuring 16x24", a "monster and powerful machine."[15]

The engine was unloaded at National City wharf on July 13th, the first ever seen in the San Diego area. But, lo and behold, the locomotive was marked "Sonora" and was named "Ures."[16]

THE "BEE LINE"

Earlier in the month, the Santa Fe had announced that an agreement had been reached with the Southern Pacific for joint use of the latter's tracks from Deming to Benson, in the Territory of Arizona, one hundred and seventy six miles. This did not mean that the two roads had become friendly, but rather that it was a concession made by Huntington because of fear that the Santa Fe would parallel the Southern Pacific's tracks.

Following this agreement, the Santa Fe announced that the route of the Sonora Railway Ltd., would be changed from the Sonora river valley, to directly north from Hermosillo, to which point it had then been completed, via Magdalena to Calabasas in Arizona, about ten miles north of Nogales. A connecting line would be built, under the name New Mexico & Arizona, from Benson southwest to Calabasas. In addition the Arizona Southern Railroad would be constructed from Tucson south to Calabasas.[17]

San Diegans, who were disappointed with the change to the northern route, and always wanted a direct route east, quickly grasped the significance of these moves, and the possibilities for a "Bee Line" by

[15] An eight wheel, American or 4-4-0 type. Xander became the first California Southern engineer.

[16] After much research by several R & L H S members it was deduced that this first Santa Fe engine in California was—Rhode Island, May 1881, builder's number 940, built as Sonora Railway No. 8, named Ures, and diverted to the California Southern.

[17] Not built at that time.

closing the four hundred mile gap from San Diego to Calabasas. This would be the shortest route to Galveston. The *Baja California & Sonora Railroad* was organized and concessions were received from the Mexican government, for a line across Lower California and the state of Sonora. Ground breaking ceremonies were held in Tijuana Valley in 1882, but the railroad was never constructed.

Getting back to the first locomotive, we find that on the trial run, Frank Kimball had the honor of "giving the rein to Ures, the iron horse," and many people enjoyed "the novelty of riding on a rail."

The British four-masted iron ship *Trafalgar* arrived August 6, 1881, fifteen thousand miles from Antwerp, Belgium, in one hundred and eighteen days, with the first cargo of rails. There were 2262 tons of fifty pound rails and fastenings, enough for twenty nine miles. Now San Diegans were "experiencing the quiet satisfaction that, at last, a railroad was a certainty."

Track laying proceeded at once and on August 31st, the engine reached the steamship wharf at the foot of 5th Street in San Diego. The San Diego Union warned: "When the locomotive reaches the wharf, accidents and runaways will occur every day. There is not a horse in the city that ever saw one." "In a series of ear-splitting, hair-raising, teeth-chattering noises," the first excursion train pulled out for National City.

THE GRAND CANYON OF THE TEMECULA

The route north paralleled the coast to the San Luis Rey River beyond which it turned north east, following up the Santa Margarita River through Temecula Canyon.

The surveyors did not understand the Southern California streams, many of which are upside down the greater part of the year. A dry bed or placid creek looked harmless enough. The canyon is the outlet for the run-off from a large watershed, including the Temecula and part of the San Jacinto plains. Provoked, one of the old settlers exclaimed: "Them Boston fellers are as stubborn as mules." He had tried to tell them that they were locating the line too low and showed them where the high water mark was up on the side of the gorge. They paid no attention to him.

Grading in the upper canyon was a herculean task, nearly seven miles through rock. The cliffs were almost perpendicular and the drill men had to use swinging scaffolds. Grades were one hundred and forty five feet to the mile and the line crossed and recrossed the stream on low trestles.

Hundreds of Chinamen[18] were brought in to do the work. It was hot and the winds blew a gale, and the dust—"Dust, he spoil 'em Chinaman's eyes, locks (i. e. rocks) mashee Chinaman's hands, spoil 'em foot, bleak 'em leg. Chinaman no likee him. He no workee up there. He go back to San Flancisky. Its allee same Hellee, you bet."

[18] Chinese coolies or laborers.

Beyond the canyon it was easier going as far as Big Laguna.[19] The route from that point had not been decided upon. There were two choices, one via Temescal Wash to Arlington, the other via Box Springs grade.

ENGINES NUMBERS 3, 2 AND 1

The bark Wright arrived September 2nd, nearly five months enroute. The first locomotive in the hold was not reached until sometime after the ship docked at National City. It was a small switch engine of the 0-4-0 type, built by Manchester #895, lettered and numbered California Southern 3. It later became Southern California 35, A. T. & S. F. 03. Converted into a saddle tank it was renumbered 2155.[20]

Next to be unloaded was number 2, a 4-4-0 Rhode Island, shop number 942. It later became Southern California 2. The third engine unloaded was number 1, Rhode Island 4-4-0 shop number 941. It later became Southern California 3, A. T. & S. F. 012 and was sold to San Diego, Cuyamaca & Eastern as their number 3 in 1902.

It is probable that Xander's engine was called number 4 at the time, there being only four engines in service. A newspaper item dated November 1881 reads: "Mr. Xander's engine No. 4 has been painted," but an editorial in August 1883 verified: "Engine No. 8, the first one on the road." The latter is correct.

With four engines in service, the rail front advanced rapidly. Construction difficulties were encountered on Soledad hill. Long, deep cuts, the "big cut" being fifty four feet deep, had to be made; hundreds of Chinamen, toiling with pick and shovel, basket and cart, in rocky ground so hard the cuts have eroded but little to the present time. Abrupt canyons were bridged by high spindly trestles, many on ten degree curves, with a grade of one hundred sixteen feet to the mile. Eight miles of track were required for the four miles airline distance between the presentations of Elvira and Sorrento. On a trip to the rail front at the end of October, an inspection party reported that the new cars "ran as smooth as on the Erie broad gauge."

Other vessels loaded with rails came in at intervals and construction continued up the coast. By the end of December the tracklayers had reached San Luis Rey,[21] forty seven miles. There were sixty bridges in forty miles.

Grading on the roadbed for the California Southern Extension in Cajon Pass, north of San Bernardino, was also well under way. The line followed near the old Los Angeles & Independence survey to the head of the pass, then turned east. This work was considered sufficient to hold the pass.

Work had been started on freight platforms and a depot was proposed at 22nd St. now Beardsley St., in San Diego. Opposition de-

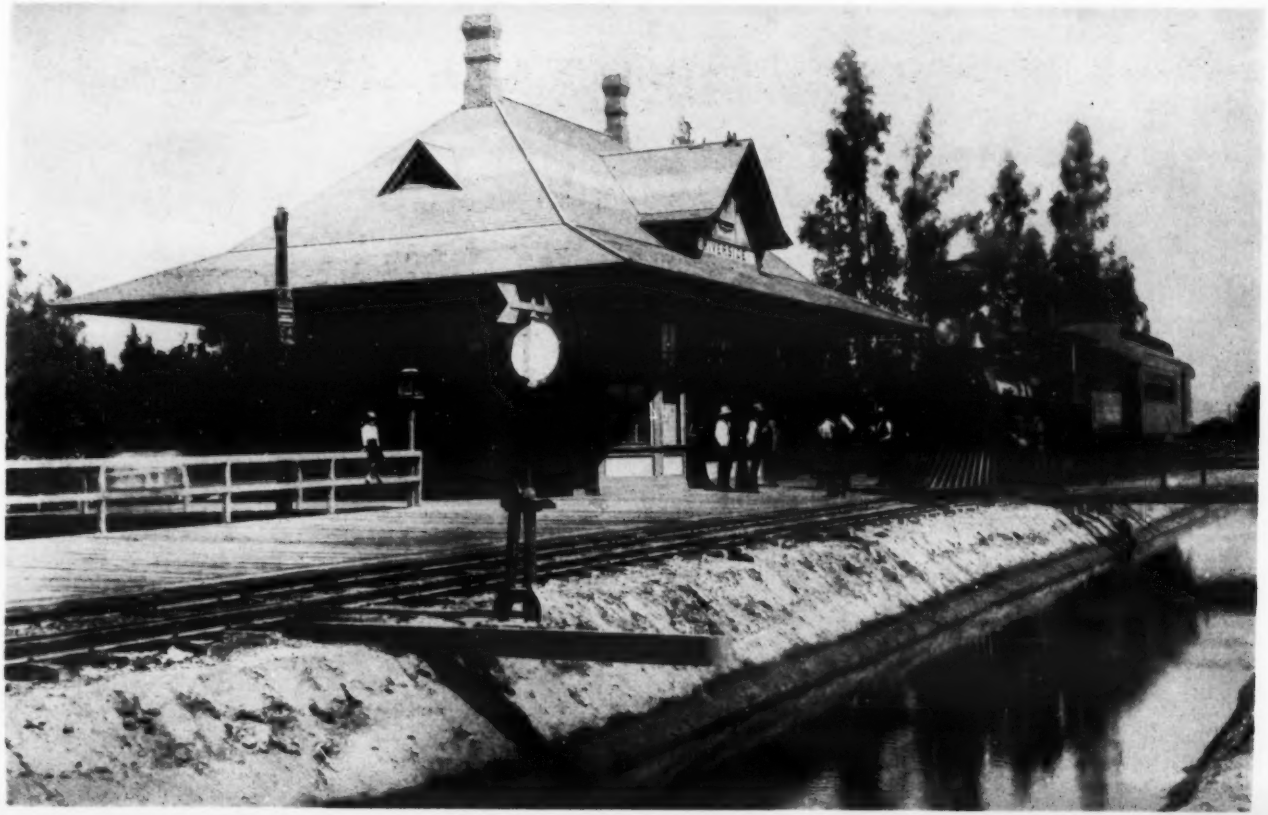
[19] Present town of Elsinore.

[20] R. V. (Dick) Dodge, father of the author, was second on the engineers seniority roster and temporarily took charge of number 3.

[21] The present community of Oceanside.

California Southern No. 3. Manchester—1881. Later Sou. Calif. #35. AT&SF #03.
At foot of Front St., San Diego.

Courtesy of R. V. Dodge



Southern California R. R., About 1890, Riverside, California—Looking North. Loco. #1 80 Combination Coach.

Courtesy of Bill Garner

veloped, a group of citizens desiring to have the main depot at the foot of D St., the present Broadway, where The Texas & Pacific had planned to locate their station. An offer was made to donate the site to the railroad.

Let us interrupt now to portray the stage setting near the end of 1881.

Santa Fe—Wm. Barstow Strong had become president in August. El Paso had been reached about the same time that the connection with the Southern Pacific was effected at Deming.

Atlantic & Pacific—Trains were running as far west as Winslow, Arizona. Construction of the high bridge over Canyon Diablo held up further advancement. Graders were working in the vicinity of the Colorado river.

Sonora Railway—Approval for the Magdalena route had been received from the Mexican government and work was just starting, northward from Hermosillo.

Mexican Central—The first rail south from El Paso had been laid in August.

The Texas & Pacific—Scott had died and Jay Gould, who had previously purchased Scott's interests, took over control.

Southern Pacific—The line from Deming east to El Paso was opened in May. Then ensued the race with The Texas & Pacific for the Rio Grande Valley. Huntington won. The road was opened to Sierra Blanca, Texas, in November, a part of the Galveston, Harrisburg & San Antonio Railway.

Now came rumor of a Huntington-Gould "tie up." Huntington had not been sitting idly by while the Atlantic & Pacific was preparing to enter California and the California Southern was building to connect with it. He had his strategy cleverly planned.

Early in 1882 came inklings that C. P. Huntington controlled the Atlantic & Pacific. It was kept quite secret but Huntington had connived with Jay Gould and together they purchased enough stock in the St. Louis & San Francisco Railway to get a controlling interest.[22]

In this alliance another calamity for San Diego developed. Gould had agreed to cede all The Texas & Pacific's granted lands west of Texas to the Southern Pacific. Included in the transaction were those 4425 acres of land in the city of San Diego. These lands, which had been donated to The Texas & Pacific to build to San Diego were deeded to the

[22] The S. L. & S. F., in partnership with the Santa Fe, had an equal interest in the Atlantic & Pacific. Thus Huntington could oppose every move Strong made with the Atlantic & Pacific.

Southern California R. R., About 1890. Riverside, California—Looking North. Loco. 23 80 Combination Coach. Courtesy of Bill Garner

Los Angeles & San Diego Railroad in 1883. Surely the Southern Pacific intended to build to San Diego now. Surely not; the Southern Pacific sold the lands for its own benefit.

San Diego petitioned Congress to enforce the terms of The Texas & Pacific land grant but without success. The editor of the San Diego Sun bewailed: "The railroad history of this town is a history of debt, delusion and despair.—The Central Pacific, the great highwayman of our coast,—has gobbled up 4000 of the 8000 acres we so crazily gave Tom Scott without consideration."[23]

THE OTHER NINE LOCOMOTIVES

The next two locomotives were sent out overland and via steamer to National City. Both were Manchester 1881, builders numbers 1007 and 1008, 4-4-0 types, ordered as California Southern numbers 4 and 7. The 7 was received first and was set up in the shops in January of 1882, the 4 in February.

Two Rogers engines, 1881, had been shipped on the bark *Osceola* from New York, August 24th of that year. These were California Southern numbers 5 and 6 and were placed in service April 4th and 13th respectively of 1882. No record can be found of any Rogers engines having been ordered for the California Southern, but several duplications of numbers were discovered by checking the Sonora roster. Two of the Rogers engines which never reached the Sonora were undoubtedly diverted to the California Southern.

Likewise, two Manchester locomotives were shipped on the bark *E. L. Pettingill* and were received in May, 1882. No additional Manchesters having been ordered, the Sonora list was again referred to, and another number 8 named Ures and number 12 named Ardilla, builders numbers 1009 and 1010 were found. These two just fitted into the California Southern roster and were assigned as numbers 9 and 10.[24]

The ship *Anna Camp* had sailed from New York June 8th with three more locomotives. She reached port on November 15th, bringing engines numbers 11, 12 and 13. They were all Rhode Island—1882—builder's numbers 1219, 1220 and 1221 and were equipped with steam and air brakes. These were the last engines to be shipped by boat around Cape Horn. They were set up in 1883 and remained on the road, later becoming Southern California numbers 5, 6 and 7 and Santa Fe numbers 0107, 0108 and 0109 respectively.

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[23] Huntington and Gould had entered into an agreement, dated November 26, 1881, culminating the contest between the Southern Pacific and the Texas & Pacific. The document contained many important provisions. One covered the "joint track" from Sierra Blanca to El Paso and another involved the Atlantic & Pacific interests. For example, the Atlantic & Pacific announced an issue of securities in January 1882, to provide funds for pushing construction to the coast. The following month, a new announcement stated that "owing to changes in ownership of the St. Louis & San Francisco, the sale of securities is suspended."

[24] According to G. M. Best, the Sonora Railway Ltd., had no Manchesters. The engines actually becoming Sonora 8 "Ures" and 12 "Ardilla" were Rhode Island 1881, numbers 1083 and 1085. These became Southern Pacific of Mexico numbers 63 and 65 after 1911. Construction on the Sonora Ry. was at a standstill awaiting approval of the Mexican Government of the change in route between Hermosillo to Nogales.

Thus the first thirteen engines of the California Southern are accounted for, all 4-4-0's except the switcher number 3 which was 0-4-0.

Coal was scarce at times and expensive. As large quantities of wood had been cut in the Temecula canyon and a supply hauled to National City, several of the engines were converted for burning the latter fuel. This accounts for the extra large stack pictured on Manchester number 10. Many train delays were charged to the efforts to economize by the use of wood.

In the depot dispute at San Diego, the railroad gave in and accepted the site at the foot of D St. A ticket office 18x28 feet was constructed, costing all of $300. In National City, a substantial two-story wood frame depot, 48x64 feet was completed in October.

A plant was erected at the foot of 26th St. in National City for pressure treating piling with creosote, to protect the timber from the ravages of the toredo, a marine borer.

PROGRESS TO COLTON

Tracklaying now outstripped the delivery of rails. The road was opened to Fallbrook station January 2nd, sixty seven miles. The steel was laid through the canyon and service as far as Temecula station began on March 27th, seventy nine miles.

The question of the route north of Big Laguna, Mile Post 93, was settled in December 1881. Numerous surveys were run from which it was determined that the best route via Temescal Wash, Arlington and Riverside would be 7.85 miles longer than the Box Springs Line, would cost $150,000 more but would reduce the maximum grade from 140 feet to 60 feet per mile and the roadbed would be less vulnerable to washouts. However, the citizens of Riverside and Arlington failed to subscribe to a subsidy satisfactory in amount. Chief Engineer Osgood received a wire to adopt the Box Springs route. The Riverside Press and Horticulturist lamented: "Mr. Nickerson wags the dog, head and tail, and locates the road three miles out on the barren plain."

Perris' survey party was transferred from Cajon Pass to the Box Springs route. Grading was rushed and the rail front advanced to Big Laguna, up the San Jacinto River valley[25] and the line was opened to Pinacate[26] on July 10th, one hundred five miles, thence to Point of Rocks, sixteen miles from East Riverside[27] at which location all the iron was used up.

After the arrival of the bark *Sarah Scott* with more rails, the track was completed to Colton August 14, 1882, one hundred twenty seven miles from National City. At last a connection was made with the Southern Pacific and every part of the country where rails run. There was great rejoicing that the isolation of San Diego had ended forever.

The first timetable listed one train a day in each direction and contained the note: "The above is National City time, which is twenty minutes faster than San Francisco time."

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[25] Railroad Canyon.
[26] Perris.
[27] For a time known as Citrus Junction, now Highgrove.

The fare was $6.00 one way, nearly 5c a mile. The round trip rate was $9.00. The National City Record commented: "The person who would begrudge $9.00 for a round trip from National City might be compared with the Southern Pacific Railroad—without a soul. The scenery in Temecula canyon is well worth the price of the trip."

Train delays from falling rocks were frequent, although no serious accident was reported from that cause. Soon tourists reaching Colton on the Southern Pacific were discouraged from going to San Diego with tales of an abundance of sand and fleas and a scarcity of water. The Southern Pacific began diverting freight from the east billed to San Diego over the California Southern, carrying it through to Wilmington, in open defiance of law, and shipping by steamer to San Diego. Instances were found where routings via California Southern, as specified by the consignee, were changed by the shipper to "via Colton," "the firms probably having a cast iron contract with Stanford & Co." "All Southern Pacific promises were broken at Colton," the National City Record declared.

RUMORS FLY

The railroad, in which over $3,000,000 had been invested, was not paying. A rise in the value of its stock resulted in the theory that the Southern Pacific was after the road to head off the Atchison, Topeka and Santa Fe. Rumors were circulated that the California Southern had sold out to the Southern Pacific. The Riverside Press correctly denied this, stating that there is "not an iota of truth in them." In ridicule, it was reported that five Los Angeles newspapers had formed a syndicate to buy the California Southern and to make Charley Crocker, of the Big Four, a present of it. Huntington had boasted that he would be able to buy it for the cost of the rails. The Colton Semi-Tropic, consistently pro-Southern Pacific, came out with an article to the effect that San Bernardino was scared, fearing that the California Southern was really going to stop at Colton and, with the Southern Pacific, erect a union depot. It was the opinion that the Southern Pacific would now build the Cutoff from Mojave via Cajon Pass to Colton.

Another rumor was that the Santa Fe would build west from Deming to Colton, paralleling the Southern Pacific and would put on steamers from San Diego to San Francisco, China and Boston. Still another possibility was the Utah Southern with the backing of Jay Gould. It expected to build down through Utah, meet the Atlantic & Pacific R. R. and have trackage rights to San Diego.

The California Southern must be extended to San Bernardino. Trouble ahead!

THE SOUTHERN PACIFIC BLOCKS THE ATLANTIC & PACIFIC

The bridge on the Atlantic & Pacific over Canyon Diablo had now been completed and track laying had progressed to Yampai, Arizona, one hundred three miles from the Colorado River, by the end of 1882.

Huntington had long since resolved that he was going to keep the Atlantic & Pacific out of California at all costs. Remember that pro-

vision in the Atlantic & Pacific charter that the Southern Pacific Railroad had the right to connect with the Atlantic & Pacific at the California boundary? Huntington did.

Surveys were begun by the Southern Pacific, locating a line from Mojave to The Needles in February. Construction started the same month. In its haste, the Southern Pacific made one error. It commenced laying English iron east from Mojave when the Atlantic & Pacific charter required the use of American steel. The track had to be relaid. Waterman[28] seventy two miles out, was reached in October. What a predicament! Here was the California Southern getting ready to build through the Cajon Pass to connect with the Atlantic & Pacific. Now instead of the Atlantic & Pacific, it would connect with a hostile railroad.

President Strong of the Santa Fe demanded to know who his partners in the Atlantic & Pacific were. Huntington won.

Now to complete the Sonora Railway episode. The silver spike was driven in October 1882 and through service from Kansas City to Guaymas was announced by the Santa Fe the following month. No "Bee Line" from San Diego met it. On the Mexican Central, about two hundred twenty five miles of track had been laid from El Paso south in 1882.

Coming to 1883, California Southern locomotives Nos. 7, 9 and 10, all Manchesters, left National City on January 4th for the Mexican Central. Two more engines passed through Colton on their way to El Paso on April 6th. It is believed that Manchester No. 4 and Rogers Nos. 5 and 6 were transferred to the Mexican Central. No. 8 was disposed of in the latter part of the year.

Surplus machinery and all rails and supplies which had been assembled for the extension through Cajon Pass likewise were shipped to El Paso. It was evident that the California Southern did not intend to push construction in the immediate future. Ties and steel came into San Diego by boat and were shipped out in train loads.[29]

2ND NO. 4

On the California Southern it was evidently the intention to standardize on Rhode Island motive power for the road engines. Sometime in 1883, another Rhode Island appeared as 2nd number 4. This engine, pictured on the turntable at San Bernardino, has been traced as built for the Atlantic & Pacific in 1881 as their number 88, renumbered Atlantic & Pacific 15, builder's number 943. It remained to be-

[28] Waterman Junction was renamed Barstow in 1886.

[29] The last spike on the Mexican Central was driven near Fresnillo in March 1884, twelve hundred twenty-five miles from El Paso to Mexico City.

come Southern California 4, then AT&SF number 011. At the end of 1883 there were only seven locomotives on the roster, namely: 1, 2, 3, 2nd 4, 11, 12 and 13.

OTHER ROLLING STOCK

The first cars were some flats, brought around Cape Horn and assembled in the National City shops. Caboose, box, boarding and other bodies were added as needed.

The first passenger cars received were two coaches which had been built at Newark, California. These were reported to be "plain but neat." Three more were received from the Newark plant and some came from eastern shops.

In 1883, several three apartment cars were constructed at National City for baggage, mail and express and were acclaimed as the last word in car builders' art. At the end of the year, the rolling stock, in addition to the seven locomotives, consisted of:

Passenger cars—7; Freight cars—69; Other—15.

THE CROSSING AT COLTON

In order to extend the California Southern to San Bernardino, it was necessary to cross the Southern Pacific's granted lands, the Colton tract, the right of way and its main line. Permission to do so was, of course, refused.

Workmen for the California Southern tore down some of the Southern Pacific's fences. Injunctions were served and Huntington, through the Southern Pacific and the Western Development Company, sued for damages and the value of the land demanded by the California Southern for its right of way, including a large sum for severance. The litigation dragged for months, with demurrers, changes of venue, and other legal artifices delaying construction work.

The Southern Pacific also filed suit for ejectment against the California Southern, claiming ownership of certain lands in San Diego county upon which the railroad had been built. Warrants were served on several "section bosses." Stays of execution were obtained and the court ruled in favor of the California Southern.

In August, 1883, Huntington had writs of attachments issued on California Southern property, on "bogus" claims. Among articles levied on, was the crossing frog, which had been fabricated in the shops at National City and had lain in the yard there for several months. A deputy was sent down to serve the attachment, but talked too much enroute. On reaching National City, he retired to a hotel room for the night. Then the California Southern "perpetrated the best joke of the season." An extra crew was secretly called, the frog was loaded on a flat car, and when Mr. Deputy appeared next morning, the frog was in San Bernardino County. At four o'clock that afternoon, an attempt was made to put in the crossing, but a "mammoth" ten wheeled locomotive of the Southern Pacific bore down on the point of intersection. Superintendent Victor grabbed a red flag and waved it violently, but

it was not heeded. The Southern Pacific kept three engines moving continuously over the location. There was no demonstration of force, though there were rumors that armed men were concealed in the tenders. This condition remained for three days, when the Court handed down its decision awarding "nominal" damages to the plaintiff, Huntington.[30] The Southern Pacific locomotives were removed, the frog was placed and a California Southern engine crossed over.

The extension to San Bernardino was quickly completed and the first regular passenger train entered that city on September 13th, 1883. Its locomotive, number 12, was decorated with evergreen, flowers and stalks of corn and one hundred pounds of squash were piled on the pilot. "It was a red letter day." This completed the first link in California of the Santa Fe Route to the Pacific.

A COMPLIMENTARY EXCURSION

On Sunday, September 23rd, the railroad ran a special excursion from San Bernardino to Oceanside and return. Each subscriber to the $20,000 fund for the extension from Colton was entitled to two tickets. The train consisted of locomotives numbers 12 and 2 with engineers Xander and Dodge, a baggage car, six coaches and six gondolas, which had been fitted with seats. Every seat was filled. The scenery enroute was enjoyed, hours were spent in the seaside resort, some youths tampered with the brakes and a melon patch was raided near Fallbrook, so a good time was had by all. The editor of the Riverside Press mused: "It looks a little funny for a Boston corporation to run *Sunday* excursions way out here in California." (Shades of our Blue Laws!)

A WARNING TO JUVENILES

Within a few weeks, the railroad company found it necessary to post and publish the following circular:

> "Notice is hereby given that boys must desist from congregating on the depot grounds at San Bernardino. Thefts and depredations of various kinds have been committed and it is a common practice to push cars up and down the track; this not only jeopardizes the property of the Company but is sure to result in serious personal injury.
>
> J. N. VICTOR
> Superintendent
>
> San Bernardino
> October 28, 1883

ATLANTIC & PACIFIC AND SOUTHERN PACIFIC MEET AT THE NEEDLES

As the Southern Pacific continued to build east from Mojave, Strong, at a conference held in Boston, had to yield to Huntington. It was agreed that the Southern Pacific should build and operate the line to the Colorado River. The Southern Pacific's track was completed to

[30] The California Southern paid the claim, over $12,000, in 1884.

the latter place on April 16th, two hundred forty-two miles across the inhospitable desert.

The Atlantic & Pacific had made plans, originally, to cross the river at a point a few miles north of the mountain peak formation in Arizona known as *The Needles* and ground had been broken for the proposed iron bridge. By the time the Southern Pacific's line was completed, the Atlantic & Pacific's tracklayers were about sixty miles east of the river. According to James Marshall, the Southern Pacific then upset the plans, forced the Atlantic & Pacific to make an expensive line change and build the required bridge about two miles below the town of The Needles, which had been established by the Southern Pacific in California about fifteen miles northwest of the peaks. Work was started on the construction of a pile trestle 1300 feet long.

The Atlantic & Pacific had reached the east bank at the bridge site in May but the high water, the swift currents and the quicksand encountered made the driving of the piles a slow and tedious task. Meanwhile service was inaugurated, the passengers being ferried across the river by steamboat.

On July 30th, the Southern Pacific announced that the bridge was nearly completed. A westbound freight train came across on August 8th and the Atlantic & Pacific was no longer a dead end railroad but a link in a new transcontinental route.[31]

Col. Henry C. Nutt, president, announced that the Atlantic & Pacific would be open for business October 21st.

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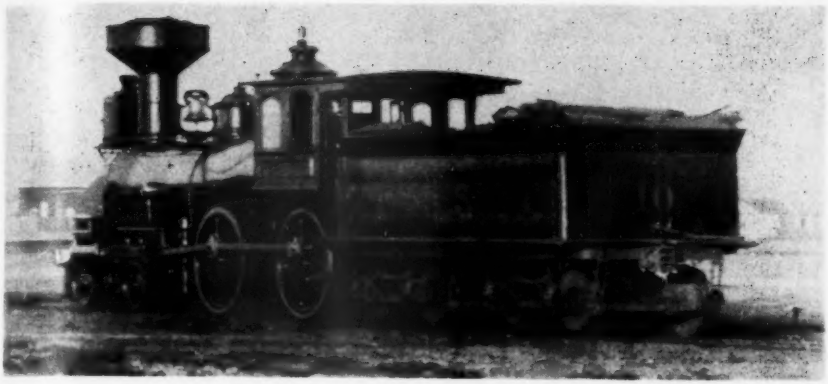
[31] Newspaper accounts of the happenings in the Needles' area were meager and it is not clear just what took place. An article dated April 7th states that the crossing will be ten miles above the Needles peaks and that no bridge is yet built. Another on April 15th reports that the abutments are all set and the work is progressing. A little later: the end of the A. & P. track is "four miles from the river bank but the track comes up the river eight miles before the bridge is reached." By June 2nd, the piling is all in "but 150 feet." High water then forced a stoppage of the work and piles and bents on the Arizona side were "leaning down stream four or five feet." In the latter part of July the river had receded and work was going ahead at the rate of forty-five feet a day.

In an interview, Charles Battye of San Bernardino, who was in the employ of the A. & P. at Needles in 1886 and made numerous explorations along the river, stated positively that there was only one bridge, the one two and one-half miles below the town of Needles and that it was built by the A. & P. This is confirmed by the General Passenger Agent of the Southern Pacific who wrote, in part, as follows: "A review of a Chronology of Events in the early history of Southern Pacific would show rather conclusively that we did not build a bridge over the Colorado River below Needles but that our construction activities over the river were confined to the crossing at Yuma."

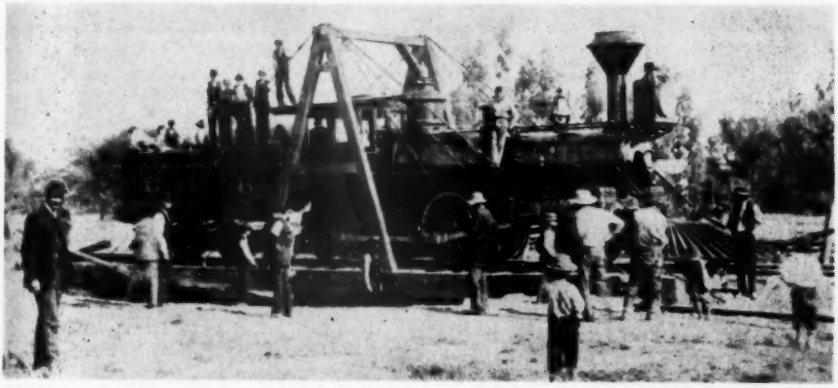
On the other hand, the Development Table in Marshall's Santa Fe, pages 402, 403 and 444, shows that the A. & P. leased the bridge, 0.28 miles, as well as the approach on the California side, 2.40 miles, from the Southern Pacific effective October 21, 1883 and the leasehold continued until the steel cantilever bridge was built at Topock, about six miles downstream, in 1890. From this it appears that the Southern Pacific did have some interest in the bridge.

During the period of high water in 1884, a considerable portion of the pile structure was washed out and again passengers and freight were ferried across by a river steamer. The bridge was rebuilt with fourteen timber truss spans, a draw-span and twenty six panels of pile trestle.



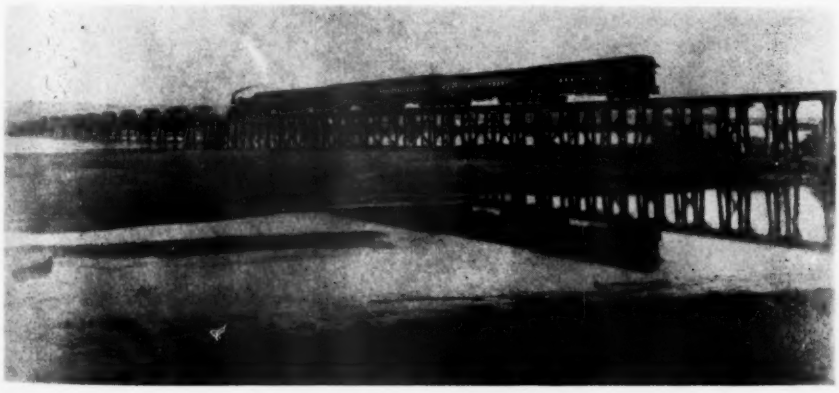
Courtesy of S. R. Wood

California Southern No. 10, Manchester 1881.

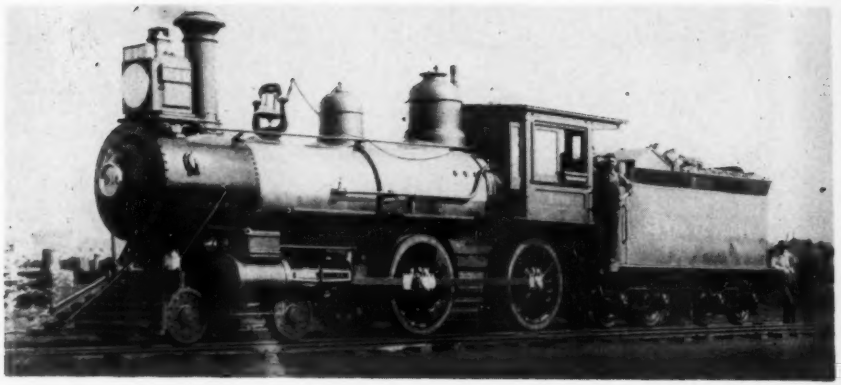


Courtesy of John Davidson

California Southern 2nd No. 4, Rhode Island—1881, on turntable at San Bernardino, Calif. Sept. 1883. Ex. Atlantic & Pacific No. 88. Became Southern California Ry. No. 4, then AT&SF No. 011.

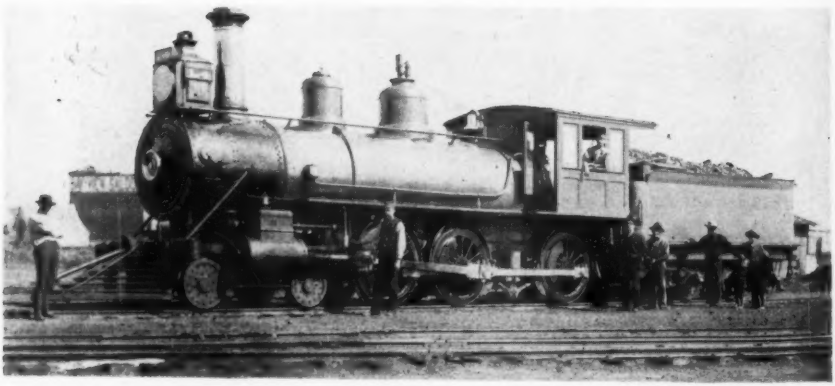


Colorado River Bridge as rebuilt in 1884.



Courtesy of R. V. Dodge

A. T. & S. F. #646, Manchester 1887 #1351 ? (#3599 on plate). Renumbered So. Cal. #15 in 1896. AT&SF 304 & 11, Sold 9-14-17 to Sacto. State Fair Assn. (for collision).



Courtesy of R. V. Dodge

Cal. Sou. #14, Baldwin 1887, #8520. Re C. S. 63, AT&S. Fe. 416.

Things did not work out well, however, and within a few weeks "the Atlantic & Pacific was chafing under the exactions of the Southern Pacific." The latter diverted freight to its Overland and Sunset routes and placed onerous restrictions on traffic, even refusing to accept shipments in Atlantic & Pacific cars and all had to be transferred at The Needles. Earlier, when the Atlantic & Pacific attempted to cross the Southern Pacific's tracks at The Needles, an injunction was obtained and a special train was dispatched from Mojave to rush the deputy to serve it.

Rumors were afloat in December that Huntington had made a second bid for control of the California Southern. Strong again demanded to know who his partners were, refusing to advance any more funds to the Atlantic & Pacific until that company built its own line to Mojave. Huntington, fearing that Strong would parallel his road, agreed that the Atlantic & Pacific and the Southern Pacific be run as one line from The Needles to Mojave. This cleared the way for the extension of the California Southern through Cajon pass. Preparations for this continuation were being made in January 1884. Strong had arranged preliminary plans for taking charge of the California Southern and was considering whether to buy the Southern Pacific's Mojave branch, at $30,000 a mile or to build an independent road, when a cyclical catastrophe, from the railroad point of view, struck Southern California.

THE FLOOD OF 1884

Every so often, at intervals of years, a series of heavy storms hits this section and the winter of 1883-1884 was the wettest on record. Over forty inches of rain fell at Fallbrook. During the first week of February, heavy rains softened the roadbed and did extensive damage to the California Southern. No sooner was the railroad cleared when a new downpour set in.

On February 15th, Dick Dodge was at the throttle of the passenger train leaving National City. The journey continued cautiously northward to Oceanside, then eastward towards Temecula. Many soft stretches were encountered and progress was finally stopped by a washed out bridge at De Luz, near the mouth of Temecula canyon. After a wait, the attempt was made to back the train to Oceanside, only to find that the track had become impassable. The train was stranded.

Six days later the National City paper said, "The express train that started up last Friday morning was on the Santa Margarita ranch the last heard from."

The first of the passengers appeared in San Diego February 20th, having "walked back in easy stages."[32] He reported that the others were left on the ill-fated train and that the railroad company had made no efforts to extricate them or the mails. Other pilgrims straggled in on foot. The crew greased the piston rods, guides and other parts of the engine, abandoned the train and joined the hikers. Engineer Dodge, on reaching National City, handed in his resignation and then told the

[32] About sixty miles, with three swollen rivers and numerous creeks to cross.

Master Mechanic in no uncertain terms what he thought of him. All reported the railroad to be in a fearful condition. Eight of the twelve miles of roadbed in Temecula canyon were gone.[33] Bridge timbers and ties were encountered many miles out in the ocean. The railroad that came around Cape Horn in ships had gone back to the sea!

It was three weeks before railroad officials reached the train and months before it was rescued. It was estimated that it would cost about $250,000 to restore the line. The California Southern, as a separate corporation, was bankrupt.

There was difficulty in raising funds. The stockholders were assessed. Finally the Santa Fe agreed to an exchange of bonds, the California Southern bondholders receiving income bonds for the First Liens and a mortgage of $10,000 a mile was allowed.

New rails were shipped out via Southern Pacific from El Paso and once more hundreds of Chinamen were assembled and put to work in Temecula Canyon and at other points on the line. Thomas Nickerson resigned as president of the California Southern in October and Francis A. Peabody was selected as his successor.

In the meantime, Strong, by pressure of threats of building an independent line, had forced Huntington to terms. In an agreement dated August 20, 1884, the Atlantic & Pacific contracted to buy the Mojave branch. Until clear title could be given by the discharge of the mortgage, the Atlantic & Pacific took a lease from the Southern Pacific at an annual rental equal to six percent of the purchase price. Included in the agreement were wheelage rights virtually extending the Atlantic & Pacific to San Francisco and other points. The Santa Fe had demonstrated excellent generalship.

Trains on the California Southern began running through the Temecula Canyon on January 6, 1885, ending San Diego's ten and one half months of isolation. Conformity with the January first timetable was prevented by a slide in the canyon.

CONQUERING THE CAJON

The hundreds of Chinamen were immediately transferred to the Cajon Pass. Many surveys had been run over the difficult terrain and officials were pleased that, finally, a road with a maximum grade slightly less than one hundred eighty five feet per mile could be attained. By April, five miles had been graded south from the junction point at Waterman and seven hundred Chinamen were at work in two enormous cuts in the pass.

Contracts had been completed for the furnishing of American steel for the extension and rail laying was scheduled to start from both ends in June. The National City Record received the "pleasant intelligence" that the last spike was driven in the pass on November 9th, marking the completion of the final link in the Santa Fe Route to the Pacific. Again Strong had won.

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[33] At one time the water reached a depth of twenty six feet in the canyon.

The first train over the extension from Waterman or Barstow to San Bernardino was a freight on the 12th bringing eight car loads of rails for the branch to Riverside.[34] The first train through to Waterman left National City on the 14th. It was a deadhead special.

The new timetable went into effect Sunday, the 15th. The Atlantic & Pacific train from the east arrived at Waterman at three thirty in the afternoon, bringing General Manager Robinson's "private palace coach." The cars were switched to California Southern train No. 2, which pulled out at four for National City, two hundred eleven miles distant. San Bernardino was reached at seven thirty where "Our people fired the first gun to announce the arrival of the first through passenger train." Commenting further, the Record said there was "no incident except by a few Southern Pacific hoodlums at Colton who kicked a bass drum and rang a bell." The train arrived at San Diego at six o'clock Monday morning. Train No. 1 left National City for the east at 9:34 P. M. on the 15th with veteran engineer Xander at the throttle.

OUR DAY OF JUBILEE

San Diego's gala day was celebrated on Wednesday, the 18th. A. E. (Father) Horton had charge of the program. The city was dressed in holiday garb. There was an elaborate parade, on horse and on foot, with brass bands, Grand Army of the Republic, Knights of Pythias and officials of the Atchison, Topeka & Santa Fe, the Atlantic & Pacific and the California Southern participating. The parade terminated at the Opera House, where there were eloquent and verbose speeches.

An exhibit in a store window on Fifth Street attracted considerable attention. There was a toy train representing a railway spanning the western continent, terminating at San Diego. At one point, a defiant woman was throwing mud at the train. A sign above read: "Mrs. Lost Angel(es), your editorial mud has not stopped the cars." A man, at another point, was placing a block in the way. Above was the inscription: "Mr. Frisco, your blocking is played out." At the frontal were the words: "Boston-Welcome-San Diego."

The San Francisco Post wrote: "This will be the greatest day in the history of San Diego." It went on to predict: "it will be followed by a big boom."

The mighty Atchison system, "the longest line of railroad in the world under one management," had reached the Pacific. Its grand terminus was at San Diego or National City. It was confidently expected that the railroad would establish a line of steamers and develop a profitable trade with the Orient.

ENTRY INTO LOS ANGELES

Prior to the driving of the last spike, official announcement had been made of another agreement between the Southern Pacific and the Santa Fe, this one for joint use by the California Southern of the former's

[34] The extension from East Riverside to Riverside, a little over three miles, was completed in December.

tracks from Colton to Los Angeles at a rental of $1,200.00 per mile per year, effective November 29th. Just two weeks after the first through train to San Diego, through service was established to Los Angeles. According to Newmark, Santa Fe engine number 354, the "L. Severy," pulled the first train. A few weeks later the National City paper stated: "Quite a number of old employees have been required to sidetrack to Los Angeles."[35]

In June 1886, a new fast train, the "Cannon Ball," was put on between National City and Los Angeles, via Colton, making the run from San Diego in seven hours and fifteen minutes.

THE GREAT BOOM

In mid-1884, the Santa Fe had served notice of its intention to withdraw from the Transcontinental Traffic Association, a pool which had been formed to divide the existing traffic equitably, in connection with the proposed launching of a line of steamships. Steamer lines were planned from Guaymas and San Diego to San Francisco. One steamer, the "City of Topeka," did call at San Diego in 1885 but regular service failed to materialize.

In the following year, the Santa Fe announced that it was in position to handle one-half of the business to and from Southern California and claimed that it was entitled to one-half. This the Southern Pacific opposed vehemently. The Association upheld the Southern Pacific and the Santa Fe withdrew. This set off a new war, this time a war of rates.

Before the last spike was driven in Cajon Pass, fares were around $125.00 from the Mississippi to Southern California. They were dropped to $100.00. Thereafter cut-throat competition set in. Down they went, the reductions being made by means of rebates, until the climax was reached March 6, 1887, when the Southern Pacific announced a rate of one dollar. It was predicted that one would soon be able to go to Chicago for two bits[36] and on arrival receive a rebate of $25.00. This did not happen and by March 10th the net fare was $10.00. Freight rates were correspondingly depressed.

"The result was to precipitate such a flow of tentative migration, such an avalanche rushing madly to Southern California as has had no parallel."[37] Passenger traffic was so heavy that, on November 9th of that year, the Atlantic & Pacific turned thirty four cars, in four sections, over to the California Southern at Barstow.

San Diego's population jumped from five thousand in 1885 to thirty five thousand in 1887. The prices of city lots doubled over night. Professional boomers had moved in and speculation ran wild throughout all Southern California.

With the tremendous amount of business, shortages of motive power, rolling stock and coal developed. The Santa Fe ordered hundreds of locomotives, ten of them being designated for the California Southern.

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[35] Engineer Xander was one of them.
[36] Twenty five cents.
[37] The Boom of the Eighties.

San Diego, Calif., October 1885

Dear Sir:

You are respectfully invited to be present at the Celebration of the Opening of the Through Railway Line of the Atchison, Topeka & Santa Fe System to the Pacific Ocean, at the Port of San Diego, to be held in this City on Wednesday, November 18th, 1885.

The completion of this line, establishing a Fourth Great Highway between Oceans in the United States, is an event whose importance, not alone to this City, but to the State and Coast, cannot be over-estimated.

The people of San Diego, with persistent energy and steadfast faith, have for a long period of years, looked forward to the day that is now so close at hand. They will cordially greet you at their jubilee.

I am, Very Respectfully,

DOUGLAS GUNN,

Chairman Committee on Invitations

GENERAL COMMITTEE ON CELEBRATION.

Philip Morse, Sec'y. D. Cave, President.

R. A. Thomas,	M. A. Luce,	Geo. A. Selwyn,
W. C. Kimball,	S. Levi,	O. S. Hubbell,
Douglas Gunn,	J. H. Simpson,	E. W. Morse,
Geo. Puterbaugh,	John G. Capron,	J. M. Julian,
Bryant Howard,	D. C. Reed,	G. G. Bradt.

COMMITTEE ON INVITATIONS.

Douglas Gunn, R. A. Thomas,
E. W. Morse.

COMMITTEE ON FINANCE.

S. Levi, D. C. Reed,
John G. Capron.

COMMITTEE ON PROGRAMME.

J. H. Simpson, Bryant Howard,
Geo. A. Cowles.

COMMITTEE ON ARRANGEMENTS.

R. M. Powers, W. W. Stewart, J. S. Mannasse,
J. M. Dodge, A. G. Gassen.

Courtesy of Fred Reif

They were not delivered fast enough to prevent a freight blockade with every side track from Albuquerque to the Pacific jammed with cars. Shipments would take as much as three months for delivery. Many Santa Fe locomotives were assigned to the California Southern, the more important groups being—

Manchester-1887-4-6-0, original 550 class. 1900 Santa Fe 317 class.
Manchester-1887-4-4-0, original 640 class. 1900 Santa Fe 1 class.
Hinkley-1887-0-6-0 567 class. 1900 Santa Fe 2243 class.

THE TEN TEN-WHEELERS

The ten new engines for the California Southern Railroad began arriving in April, 1887. All were Baldwin ten-wheelers for freight service. They were given California Southern numbers 2nd 5 to 2nd 10 and 14 to 17 inclusive. They carried the builders numbers 8348, 8352, 8356, 8393, 8397, 8517, 8520, 8522, 8523 and 8524. When the renumbering into the Southern California series took place in 1896, the first three were numbered in the 50 class and the rest in the 60 class. Later they became the Santa Fe 395 and 412 classes.

LOS ANGELES AND SAN GABRIEL VALLEY RAILROAD

The charter of the California Southern did not provide for the construction of branch lines, but there was nothing to prevent it from leasing and operating feeders if built by other corporations. In planning future expansion, this procedure was followed.

The *Los Angeles & San Gabriel Valley Railroad Company* had been organized by James F. Crank in 1883, and its line from Los Angeles to Pasadena via Highland Park, had been opened on September 16, 1885. The road was extended eastward to Lamanda Park that year and on to San Gabriel Valley in 1886, approximately twenty miles.

The Santa Fe purchased this line in January 1887 and its four locomotives were turned over to the California Southern.

L. A. & S. G. V. RR's numbers 1 and 2 had been obtained from a dealer in Cincinnati and prior ownership has not been determined. Both were 4-4-0's. Number 1 had inclined cylinders resembling the products of Breese & Kneeland Locomotive Works. It was given the California Southern number 18. Newspaper references indicate that number was built by Brooks Locomotive Works, probably outshopped about 1870. It had sixty inch drivers and weighed about thirty three tons, being renumbered California Southern 19 and evidently soon disposed of. Number 3 was Pittsburg 1886 No. 815, a 4-4-0, and was given California Southern number 20, later becoming Southern California 9 and Santa Fe 0163. Number 4 was Pittsburg 1886 No. 861, a 2-6-0, given California Southern number 21. It had the honor of being the only mogul on the Santa Fe in California. It became Southern California 50 and Santa Fe 0213, later being renumbered 2418.

Number 21 concludes the California Southern roster but the numbering series was continued under the Southern California Railway and four ten-wheel Baldwins were given numbers 22 to 25 inclusive in 1894.

When San Diego, Cuyamaca & Eastern Railway's number 1 was purchased in 1892 it was assigned the number 2nd 19 in the California Southern series.[38]

SANTA FE RAILS TO LOS ANGELES

Next, to provide its own line to Los Angeles, the *San Bernardino & Los Angeles Railway Company* was incorporated November 20, 1886 to build from San Bernardino west to a junction with the Los Angeles & San Gabriel Valley Railroad, forty miles. The first train over the San Bernardino & Los Angeles end ran on April 25th of the following year and the two lines were turned over to the California Southern for operation on May 31st.

In June a cut-off was constructed from Raymond Hotel to Lamanda Park having a length of three and six-tenths miles and shortening the distance between the two points more than one mile compared with the route via Pasadena. It was planned that the "cut-off" would be the main line, but its scheduled use was discontinued in the latter part of the next year.

All locomotives and cars of the California Southern and the Santa Fe were transferred from the Southern Pacific's to their own yards and trains commenced arriving and departing from the new depot at the foot of First Street in Los Angeles on the first of June.

DISASTERS

In November of 1887 a series of mishaps took their toll. Fire destroyed the Los Angeles depot. Engine 2nd 8 was wrecked at Irvington, ten miles north of San Bernardino. A few days later some freight cars ran away from the same station and struck a train of empty passenger cars coming up the grade. Engineer E. D. Thompson and Fireman Gaffney were killed. The wreckage took fire, destroying much of the furniture consigned to the new Hotel del Coronado.

OTHER ADDITIONS TO THE NETWORK

The *Riverside, Santa Ana & Los Angeles Railway Company* was incorporated September 29, 1885 to build down the Santa Ana canyon, thence north west to Los Angeles. The trackage from the junction with the California Southern at East Riverside to Riverside belonged to this company. When surveys were run in the canyon in July of the next year, the party discovered that Southern Pacific surveyors were also in the field.

The road was extended from Riverside to South Riverside and Rincon to Yorba, near Richfield,[39] where the line turned south through what is now the Olive District to Orange. Construction continued and the road was opened to Santa Ana on September 15, 1887.[40]

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[38] See S. R. Wood's Locomotives of the Atchison, Topeka & Santa Fe System. R. & L. H. S., for complete details.

[39] Now Corona, Prado and Atwood.

[40] The cut-off between Atwood and Fullerton was not built until 1910.

The section from Orange via Fullerton to Ballona Junction, now Redondo Junction, was placed in operation August 12, 1888, thirty miles.

The *Los Angeles & Santa Monica Railway Company* was organized January 6, 1886 and covered construction from Los Angeles to Ballona Junction, thence via Inglewood to Port Ballona[41] where the Santa Fe made an effort to develop a harbor of its own. The track reached Inglewood July 31, 1887 and operation from Los Angeles to Port Ballona started September 23rd, seventeen miles.

The *San Bernardino & San Diego Railway Company* was incorporated November 20, 1886 to build from Santa Ana to San Juan Capistrano and down the coast to Los Angeles Junction[42] on the California Southern, just north of Oceanside, fifty miles. This was known as the "Surf Line" and with its completion August 12, 1888, the rail distance between Los Angeles and San Diego was shortened to one hundred twenty seven miles and the running time was cut to four and one half hours, but the fare remained $9.00 for the round trip.

During the location work near Santa Ana, the surveyors again encountered Southern Pacific field parties, who pulled up the Santa Fe's stakes in another feint to build to San Diego.

The "Surf Line" was not altogether a blessing and the San Diego Union soon complained: "the new short line gives Los Angeles a chance to misrepresent San Diego."

The *San Diego Central Railroad Company* was created November 8, 1886 for the purpose of building a feeder line through the back country of San Diego County, from Oceanside via Escondido, Bernardo, Poway and El Cajon to San Diego. Only the part from Escondido Junction to Escondido, twenty one miles, was completed, service being started December 31, 1887. Trains were operated from Escondido to San Diego, via Oceanside, for many years.

The *San Bernardino Valley Railway Company* was incorporated January 12, 1887 and the branch from San Bernardino to Mentone, twelve and a half miles, was opened December 31, 1887. Later this became part of the Redlands Loop.

The *San Jacinto Valley Railway Company* was formed to build a branch from Perris to San Jacinto, twenty miles. The company was incorporated March 7, 1887 and the line opened for traffic April 30, 1888.

THE CALIFORNIA CENTRAL RAILWAY COMPANY

As you would expect, the many separate corporate identities made a cumbersome structure and rumors of a proposed simplification were rife in April of 1887. This was accomplished May 20th when the eight companies building the branch lines were consolidated into the *California Central Railway Company.* Articles of incorporation were filed on that date. The principal place of business was San Bernardino. The California Central had no motive power of its own, but depended on the California Southern.

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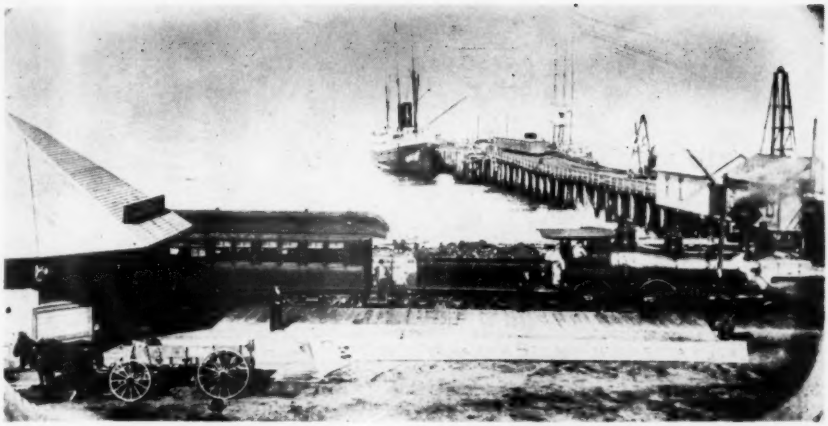
41 Near the present site of Playa del Rey.
42 Now Fallbrook Junction.



Redondo, Station on the Redondo Beach Railway.

Courtesy of R. V. Dodge

Santa Fe Depot at San Diego about 1912. Built in 1887 for California Southern RR. Razed in 1915. Note CSRR monogram on tower.

Courtesy of W. B. Garner

Santa Fe Depot, San Bernardino, Cal., 1894-7. Built by Cal. Southern R. R., 1886, destroyed by fire 1916.
Upstairs: Offices of Telegraphers, Dispatchers and Superintendent.
Downstairs: Baggage Room, Ticket Office, Waiting Room and Harvey Dining Room.

Courtesy of R. P. Middlebrook

First passenger train California Southern No. 12 at San Bernardino Sept. 13, 1883.

The California Central built the Redondo branch from Inglewood to Redondo Beach, eleven miles, which was opened April 16, 1888. For some accounting reason, this stretch was kept separate and the *Redondo Beach Railway Company* was incorporated April 23rd of the same year. The line was then operated under lease to the California Central.

SUBSIDENCE AND REACTION

Early in 1888, the first symptoms of stringency in the money market became evident. The suckers who were expected to buy lots at inflated prices failed to appear, those speculating on the margin dumped their holdings and the boom collapsed.

During the wild orgy, many substantial developments had been made, including the building of street railways, horse, cable and electric, and steam motor lines.[43]

THE SAN BERNARDINO DEPOT

The citizens of San Bernardino donated forty-five acres of land for depot grounds and shops, in addition to the right of way and the $20,000 subsidy. In August 1883, the San Bernardino Times announced that it was the understanding that plans had been adopted by the Railroad Company for the erection of a first class passenger and freight depot at that place. The San Diego Union responded with: "Glad to hear it. But how will the San Bernardino people like to see their first class depot a duplicate of San Diego's first class passenger etc. Eh?"

By 1884, the people became "justly indignant" because the railroad had ignored what San Bernardino had done and had stayed their hands from building a necessary depot, using instead a box car for greater economy. It was, they claimed, "a predetermined plan to get all they could and keep all they got until such time as a sale to some reliable company might be made." Anent the system of rigid economy, one critic said: "In order to save, they would not hesitate to split a *frijole*" (a Mexican bean). The Colton Semi-Tropic lampooned in January 1886 asking: "When will the magnificent depot be built in San Bernardino? The depot now is a box car."

The following June, work was started on the first meritorious railway structure on Third St. It was a two story wooden building with office accommodations for the operating officials. Finished in the latter part of the year, it served until it was destroyed by fire in 1916. Early in the next year construction of a roundhouse with ten stalls and a sixty foot turntable was started. Brick for the building was "in the kiln" in March, and the coal chutes were nearing completion.

OTHER STATIONS

Many creditable buildings, for the period, were erected along the route of the California Southern for station purposes. During 1886, depots were opened at Colton, Perris, Oceanside and Del Mar. The

[43] See Bulletin No. 71 for the latter in the San Diego vicinity.

following year saw a new depot, forty feet by one hundred feet, completed at the foot of "D" Street in San Diego. With its ornate tower, it continued a landmark until it was razed in 1915, to make room for tracks in front of the present station. Fittingly, the tower, bearing the monogram CSRR on each of its four sides, was pulled down by two switch engines. The depots at Carlsbad[43a] and Encinitas, still in service, were also completed in 1887.

In addition, many stations were built on the California Central in 1887 and 1888. Fifty carloads of lumber were received at San Diego for depots between San Bernardino and Los Angeles at one time in 1887. "La Grande" station at the latter city replaced the depot destroyed by fire.

CHANGES IN POLICY

Changes had been going on in the California Southern set up, somewhat surreptitiously. Newspaper editors frequently deplored the railroad secrecy at every turn.

In 1887, the announcement was made that the trains of the whole system in Southern California would be dispatched from San Bernardino, instead of National City.

As soon as the "Surf Line" was placed in operation, passenger train service from National City to San Bernardino via Temecula Canyon was discontinued and, before Escondido heard the locomotive whistle, notice was given that the road from San Bernardino to Los Angeles would be operated by the California Central instead of the California Southern.

Starting in 1887 the rails were changed from fifty pound to sixty one and sixty four pound. By the end of the year there was a large accumulation of battered cars and engines at the National City shops.

NATIONAL CITY LOSES THE SHOPS

As far back as January 1886, there were rumors that shop facilities would be established at either Colton or Riverside or San Bernardino. San Bernardino was selected and the Weekly Times published this explanation: "The impression seems to prevail that the California Southern shops will be removed from National City. This is wrong. These here are additional."

While the San Diego Union suspicioned that the shops were being removed, the National City Record still had faith in the railroad management:

> "Fight, neighbors, fight! Fight on if you will.
> The headquarters are at National still.
> But, in the fight, do not pull your pops,
> For National City also keeps the shops."

[43a] The Santa Fe announced that the station at Carlsbad would be closed in July 1949, but considerable opposition resulted from this move.

By February 1887 in San Bernardino, "Work on the shops is going on with vigor" and the walls were going up in July.

Then, piece by piece, the machinery and equipment were removed from National City and shipped to San Bernardino. By April 1889 only a "few lonely workmen remained." There was "Howling and gnashing of teeth over the unjust treatment" in National City to no avail. By that time, the shops were, and still are, at San Bernardino.[43b]

The cresoting works completed a commercial order, treating the piles for the Spreckels Brothers' coal bunker wharf, being built at the foot of "G" Street in San Diego, then shut down.

NEXT, THE OFFICES

In the spring of 1888, it became common talk that the offices of the California Southern, which had been located at San Diego, were to be moved to Los Angeles. The railroad officials explained that this change would place the company in a position to divert Los Angeles' ocean commerce to San Diego. Attempts being made to transform the sloughs at San Pedro and Wilmington into a workable harbor had not, at that time, produced the desired results and the project was contemptuously called the "money in the mud." The Port Ballona development proved to be impractical and was soon abandoned.

As a sop, the railroad promised to tunnel Soledad hill, thereby materially reducing the heavy grades from Sorrento to Linda Vista and Selwyn to Linda Vista. Needless to say, this was never done. Other grades were to be reduced and the wharf at San Diego was to be improved to handle the anticipated traffic.

The people of San Diego consented to the proposals and the passenger and the freight offices were established in Los Angeles.

MORE SHIPS THAT NEVER CAME IN

In the preceding year, the California Central acquired the Babcock and Story wharf in San Diego and it became known as the "Santa Fe Wharf." At that time, it was the popular report that the railroad was seriously contemplating a steamship line to China and Japan. Rumors only.

In the spring of 1889, the *Peninsular & Oriental Steamship Company* was actually organized and a steamer was scheduled to sail from Yokohama, Japan, for San Diego in June. Plans for a grand celebration and an excursion on the arrival of this ship were made. No ship came.

Discriminatory rates and misrepresentation prevented the promised business from coming to San Diego Bay.

THE SOUTHERN CALIFORNIA RAILWAY

A severe shake-up in the management of the Santa Fe took place at that time. W. B. Strong was succeeded by Allen Manvel as president and the principal office was moved from Boston to Chicago.

[43b] These shops were converted and overhaul Diesel locomotives exclusively. The last steam engine out shopped was #3833, Sept. 15, 1949.

This foreshadowed sweeping changes in the management of the local roads. Economy measures were the order of the day and effective November 7, 1889, the California Southern Railroad Company, the California Central Railway Company and the Redondo Beach Railway Company were consolidated into the Southern California Railway Company.

Southern California Timetable No. 1 became effective February 23, 1890.

CURTAIN

So we ring down the curtain on the California Southern, the railroad the people of National City and San Diego bought and paid for, believing that they would become its Pacific Coast terminus. Now, instead of being the grand terminal, they were just the tail end of a branch line.

The power of a railroad, in those pre-automobile days, to kill a community is strikingly portrayed by the census figures. The population of San Diego in 1890 had dropped to 16,169 and in 1900 the figure was 17,700. In that decade the population of Los Angeles increased from 50,395 to 102,479.

Upon the death of C. P. Huntington in 1900, E. H. Harriman became president of the Southern Pacific and that company's attitude toward San Diego was radically changed. After years of unsuccessful efforts by San Diegans to get a direct line east as well as a competing railroad, the building of the San Diego & Arizona Railway by the Spreckels' interests and the Southern Pacific was announced in 1906.[44] This was the turning point. The 1910 census showed San Diego's population had doubled and the growth has continued steadily, the last count being 362,000.[45]

SEQUEL

To stop at this point would leave the history incomplete, so a few of the more important happenings of the succeeding years are listed.

1891—Floods in February again destroyed the line through Temecula canyon and it was abandoned from Fallbrook station to Temecula station.

1893—Perhaps as retribution for its lack of faith, despite its name,[46] the affairs of the A. T. & S. F. RR. went from bad to worse and, in this depression year, the company became insolvent, passing into receivership on December 12th.

1894-1895—The Southern California Railway began using oil for fuel. The first regular freight engine to be converted was Baldwin number 10 of the California Southern series. Santa Fe number 652, one of the Manchesters, was the first passenger engine changed over.

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[44] See Bulletin 71.

[45] 1946.

[46] Santa Fé means *Holy Faith.*

1895—*The Atchison, Topeka & Santa Fe Railway Company,* the present corporation, was organized. The Atlantic & Pacific Railroad was forced into receivership.

1896—All engines assigned to the Southern California Railway were renumbered into its own system in December.

1897—The Santa Fe obtained possession of the Atlantic & Pacific and the road was reorganized under the name *Santa Fe Pacific* June 24th.

1900—The present locomotive numbering system was adopted by the Santa Fe.

1902—Santa Fe Pacific was conveyed to The Atchison, Topeka & Santa Fe Railway July 1st.

1904—Southern California Railway was leased to the Santa Fe June 1st.

1906—Southern California Railway was sold to the Santa Fe January 17th.

Little remains of the old California Southern. At National City the station, roundhouse and water tank still stand. As previously mentioned, the stations at Encinitas and Carlsbad, also the one at Perris, continue in service. A few remote sidings have the Krupp 1881 fifty-two pound rail. Of the original main line trackage, the section from National City north to Fallbrook Junction, now vastly improved, is part of the Fourth District of the Santa Fe's Los Angeles Division upon which the silvery *San Diegans* now slither by DIESEL POWER. The section from Fallbrook Junction east for about ten miles is part of the Fallbrook District. The section from Perris north to Highgrove is part of the San Jacinto District. From Highgrove to San Bernardino is a portion of the Third District. Finally, the California Southern Extension from San Bernardino, through the Cajon Pass and groves of grotesque Joshua trees, to Barstow is the important First District carrying the "strings of varnish" and the "drags" of the Union Pacific, in addition to those of the Santa Fe.

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Acknowledgments for their generous assistance in the research are due: Sylvan R. Wood and Gerald M. Best, of the Railway & Locomotive Historical Society, John Davidson, of the San Diego Historical Society, and many others.

The Central Military Tract Railroad

FEBRUARY 15, 1851 TO JULY 9, 1856

By A. W. Newton

In the early '50s with railroads being projected all over Northern Illinois, as well as some being constructed, the citizens of Galesburg initiated a movement for the building of a road from that town that would, by joining some other railroad, provide it with an outlet for the products of the surrounding territory. Chicago, already a receiving and distributing point, with connections by rail and water with the country east of there to the Atlantic Ocean ports, was the ultimate ambition of these Galesburg pioneers.

At that time the Rock Island and La Salle Railroad (later the Chicago and Rock Island) was under construction up the Bureau Valley and passing a few miles north of Galesburg. A connection with this railroad seemed the solution of the problem and the realization of the desires of these people.

Like most, if not all of the railroad projects at that time, the promoters were local people of limited financial ability, and even less ability to organize, promote, and build a railroad. But they had the confidence of pioneers in their ability to overcome all obstacles. Accordingly, William McMurtry, Chauncey S. Colton, James Bunce, W. Selden Gale, Silas Willard, and other Galesburg pioneers, proceeded to Springfield, where, on February 15, 1851, the State Legislature passed an act authorizing the construction of a line of "railroad commencing at Galesburg, in the county of Knox, and running from thence, in a northeasterly direction, on the most direct and eligible route to, and to connect with the Rock Island and La Salle Railroad, at such point in the County of Henry or Bureau, as the said company hereby incorporated may designate."

The act gives the names of the men above mentioned and "their associates" who were "created a body corporate, with perpetual succession, under the name and style of the Central Military Tract Railroad Company."

Following the passage of the Act of February 15, 1851, a meeting of "Corporators and Stockholders" was held at Henderson, Illinois, April 12, 1851, when the Company was duly organized, and a Board of Directors elected. Prior to the election, "On motion, it was resolved to elect but ten of the thirteen Directors at this time." The election resulted in the choosing of William McMurtry, J. M. Wetmore, Ezra Chapman, E. G. Ellett, Alfred Brown, William A. Wood, James Bunce, Silas Willard, Loretus E. Conger, and George C. Lamphere, with William McMurtry as the road's *first* President. It will be noted that Chauncey S. Colton's name does not appear as Director, about which comment will be made later.

February 10, 1851, five days prior to the passage of the Central Military Tract Railroad Act, an amendment to the Northern Cross Railroad Act was authorized by the Legislature for the building of "a lateral branch of said Northern Cross Railroad, commencing *at any convenient*

point on said road in Adams County and running thence through the Military Bounty Tract." This reference is made because at the outset each of these roads had a common location for their eastern terminii, near La Salle on the Illinois River, at the head of river navigation, and the southern terminus of the Illinois and Michigan Canal. For each road to build as projected would mean parallel and competing lines for the distance between Galesburg and the Illinois River. As the history of the Central Military Tract Railroad develops, it will be seen that this was really an important "provision."

It is evident that Galesburg citizens proposed to have a railroad and have it quickly. On April 18, 1851, the board authorized the Secretary to "open correspondence with William Jarvis, Esq. (Chief Engineer of the Rock Island and La Salle Railroad) on procuring an engineer for surveying the road."

Although not named in the records until sometime later, it is evident that a Mr. Wm. P. Whittle was hired at once, for on May 23, 1851, committees were appointed to accompany the engineer over the routes under consideration. As first planned, the road was to connect with the Rock Island and La Salle Railroad at a point east of Pilot Grove.

June 25, 1851, a committee consisting of Dr. James Bunce and W. Shelden Gale, Esq. was appointed to attend a meeting of the Directors of the Rock Island and Chicago R. R. Co. in Chicago. (The name of the road had recently been changed from the "Rock Island and La Salle" to the "Rock Island and Chicago.")

July 25, 1851, at a meeting of the Board it is recorded: "Mr. Whittle, the engineer being present, was requested to make a verbal report of progress of the survey of the road." (This is the first mention of the engineer's name). On the strength of his report the Board "Resolved, that the engineer be and is hereby directed to survey and make estimates of a route from this town (Galesburg) east of Pilot Grove to the present line (Rock Island and Chicago) if he shall find it practicable . . ."

September 18, 1851, the Board finally selected the route from a point "at the south side of square, in center of Broad Street, Galesburg, via the Pilot Grove Route." Evidently the selection of the Pilot Grove Route (Sept. 18, 1851) resulted in serious opposition from Henderson citizens, for at its meeting November 11, 1851, the board agreed, under certain conditions to be met by the townspeople, to construct a spur to Henderson. The offer was not accepted however. November 11, 1851, the board "ordered that contracts for the grading and masonry . . . and ties, be let on the 24th day of December." Notices to be published in Galesburg "News Letter"; Knoxville "Journal"; Monmouth "Atlas"; Quincy "Whig"; Springfield "State Register"; St. Louis "Republican"; Chicago "Tribune"; and Buffalo "Advertiser."

December 6, 1851, at a board meeting, "On motion of James Bunce, William P. Whittle was appointed Chief Engineer of the Central Military Track (sic) Railroad Company." Prior to this date his title had been "Engineer."

California Southern Railroad Company.

California Central Railway Company.

JOINT TIME CARD No. 1.

W.B.GARNER
501 ARROWHEAD AVE.
SAN.BERNARDINO.CALIF

To Take Effect Sunday, October 16th, 1887, at 12:01 A. M.

FOR THE INFORMATION AND GOVERNMENT OF EMPLOYES ONLY.

THE COMPANIES RESERVE THE RIGHT TO VARY THE SAME AS CIRCUMSTANCES MAY REQUIRE.

PREVIOUS TIME CARDS ARE VOID.

Read Rules and Regulations Carefully. Important Changes have been made.
Time in this Schedule is Pacific Standard Time of the New System.

Courtesy of W. B. Garner

SAN DIEGO DIVISION. — CALIFORNIA SOUTHERN R. R. CO.

SOUTH BOUND.

	STATIONS.	Distance from Barstow.	Capacity of Sidings.	4. San Diego Express.	6. Night Express.	8. Passengr.	10. Passengr.	12. Passengr.	14. Passengr.	16. Santa Ana Express.	18. Passengr.	30. Through Freight.	32. Way Freight.	34. Freight.	36. Santa Ana Freight.
		Miles.		First Class.	First Class.	First Class.	First Class.	First Class.	First Class.	First Class.	First Class.	Second Class.	Second Class.	Second Class.	Second Class.
				Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily Except Sunday.	Daily Except Sunday.	Daily Except Sunday.
	Leave.														
N	SAN BERNARDINO.	81.0		10:50 am	9:00 pm	8:00 am	10:20 am	11:10 am	1:10 pm	6:35 pm	6:50 pm	4:30 am	6:40 am		7:00 am
	3.5														
T	COLTON.	84.5		s 11:00	s 9:15	s 8:10	s 10:30	11:20	s 1:20	s 6:45	s 7:00	4:45	7:15		7:15 7:45
	3.6														
T	East Riverside.	88.1		11:08	s 9:30	8:20 am	10:40 am	11:30 am	1:30 pm	6:55 pm	7:10 pm	5:00	7:30		8:00 am
	7.1														
	BOX SPRINGS.	95.2		f 11:35	f 10:10							5:42	8:05		
	11.0														
T	PERRIS.	106.2		s 11:52	s 11:00							6:22	9:00		
	12.0														
T	ELSINORE.	118.2		s 12:33 pm	s 11:58							7:12	10:		
	4.4														
T	WILDOMAR.	122.6		s 12:39	f 12:18 am							7:26	10:18		
	4.6														
T	MURRIETA.	127.3		f 12:47 1:07	12:40 1:05							7:42 7:57	10:40 10:55		
	5.8														
T	TEMECULA.	133.0		s 1:18	s 1:35							8:17	11:20	5:40 pm	
	7.5														
	RANCHITA.	140.5		f 1:43	f 2:06							8:46	11:48	6:08	
	4.0														
T	FALLBROOK.	144.5		s 1:58	s 2:25							9:02	12:05 pm 12:20	6:25	
	6.5														
	DE LUZ.	151.0		f 2:23	f 2:55							9:42	12:55	6:55	
	8.5														
	YSIDORA.	159.5		f 2:43	f 3:30							10:18	1:35	7:30	
	4.7														
T	OCEANSIDE.	164.2		s 2:54	3:50 4:50							10:40	2:10	7:50	
	3.1														
T	CARLSBAD.	167.3		s 2:59	f 4:56							10:52	2:26	8:02	
	2.4														
	STEWART'S.	169.7		f 3:04	f 5:00							11:01	2:40	8:12	
	6.6														
T	ENCINITAS.	176.3		s 3:15	s 5:15							11:30	3:15	8:40	
	6.6														
T	DEL MAR.	182.9		s 3:34	s 5:35							11:59	3:50	9:20	
	2.6														
	CORDERO.	185.5		s 3:40	5:45							12:12 pm	4:05	9:45	
	7.0														
	SELWYN.	192.5		f 4:01	f 6:07							12:52	4:50	10:24	
	9.7														
	OLD TOWN.	202.2		s 4:20	s 6:30							1:30	5:30	11:05	
	3.5														
T	SAN DIEGO.	205.7		s 4:35	6:45							1:48	5:45	11:30	
	1.8														
T	32D STREET.	207.5		f 4:45	f 6:55							2:00	6:00	11:30	
	3.7														
N	NATIONAL CITY.	211.2		4:55 pm	7:10 am							2:20 pm	6:15 pm	11:45 pm	
	Arrive.														
				Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily Except Sunday.	Daily Except Sunday.	Daily Except Sunday.

ALL trains must approach South Switch of Y at San Bernardino under complete control.

Courtesy of W. B. Garner

SAN BERNARDINO DIVISION. CALIFORNIA SOUTHERN R. R. CO.

NORTH BOUND.				Distance from National City.	STATIONS.	Distance from Barstow.	Capacity of Siding.	SOUTH BOUND.		
41. Accom.	39. Fast Freight.	1. Atlantic Express.						2. Pacific Express.	40. Fast Freight.	38. Accom.
Second Class.	Third Class.	First Class.		Miles.		Miles.		First Class.	Third Class.	Second Class.
Daily.	Daily.	Daily.			Arrive. Leave.			Daily.	Daily.	Daily.
1:00 pm	11:00 am	1:40 pm	N	211.2	BARSTOW.			2:55 pm	6:00 pm	2:00 pm
					11.6					
12:15 pm	10:15	1:18		199.6	COTTONWOOD.	11.6		3:15	6:45	2:45
					9.5					
11:42	9:42	1:00		190.1	POINT OF ROCKS.	21.1		3:28	7:25	3:28
					10.2					
11:02	9:02	12:40		179.9	ORO GRANDE.	31.3		3:46	8:04	4:10
					5.3					
10:42	8:42	12:30	T	174.6	VICTOR.	36.6		3:56	8:25	4:30
					8.3					
10:10	8:10	12:10 pm		166.3	HESPERIA.	44.9		4:18	8:59	5:05
					10.8					
9:30	7:30	11:45	T	155.5	SUMMIT.	55.7		4:50	9:45	5:50
					6.6					
8:35	6:35	11:18	T	148.9	CAJON.	62 3		5:17	10:25	6:30
					10.9					
7:34	5:34	10:30		138.0	IRVINGTON.	73.2		5:52	11:20	7:25
					7.8					
7:00 am	5:00 am	10:10 am	N	130.2	SAN BERNARDINO.	81.0		6:10 pm	11:55 pm	8:00 pm
Daily.	Daily.	Daily.			Leave. Arrive.			Daily.	Daily.	Daily.

Courtesy of W. B. Garner

Joint Official List of Stations, Agts., Station

No. 1.

CALIFORNIA SOUTHERN

STATION NO.	TELEG'H CALL.	STATION.	AGENT.
		SAN DIEGO DIVISION.	
0	N C	National City....§‡	O. Neal.
	M D	National City Store	
4	S N	San Diego, 23d	W. H. Davenport
6	O ;	San Diego D St..*§	L. J. Kyes.
.....	G O	San Diego City Office..*§	L. J. Kyes.
.....	G O	San Diego.....	Gen. Frt & Pass. Agt
9	W X ;	Old Town.....	
19	S Y	Selwyn.....	
26	R O ;	Cordero.....	
29	M R	Del Mar..... x	E. W. Steele.
35	S A ;	Encinitas.....	
		ESCONDIDO. *E. L. & T. Co.	
42	.....	Stewart's.....	
44	C A	Carlsbad.....	
47	X	Oceanside.....	F. A. Jones.
52	R A ;	Ysidora.....	
61	Z ;	De Luz.....	
67	F B	Fallbrook..... x	J. A. Scott.
71	M S ;	Ranchita.....	
79	M A	Temecula..... x	A. B. Beale
84	M U	Murrieta..... x	E. M. Marshall.

STATION NO.	TELEG'H CALL.	STATION.	AGENT.
		SAN	
89	.....		
93	N O		
105	P		
116	B S		
124	J N		
127	C		
.....			
.....			
		SA	
131	D		
	D S		
138	X N ;		
149	J		
156	S U		
167	.....		
175	V R		
180	.....		
191	P O ;		
200	W O ;		
212	B A		

CALIFORNIA CENTRAL

		RIVERSIDE DIVISION.		LOS A
124	J N	Citrus	Jas. Clapperton.	L 41 V A
R 2	R S	Riverside ..... §	C. M Garwood.	L 43 A R
R 6	....	Casa Blanca.....		L 45 .....
R 10	.....	Arlington		L 46 .....
R 14	S O	South Riverside ...	H. E Taylor.	L 47 S J
R 21	R N	Rincon	H. B Sherman.	L 48 .....
		LOS ANGELES DIVISION.		L 49 M S
141	D	San Bernardino... §	C. B. Hudson.	L 50 A D
L 4	.....	Rialto		L 51 .....
L 10	....	Etiwanda		L 52 D
L 15	S C	South Cucamonga x	P. H. Patmon.	L 53 Q
L 19	N O	North Ontario.....	J. S Brooks.	L 54 ....
L 23	C A	Claremont x	Lillian Maxfield.	L 55 G A
L 25	.....	Palomares		L 56 ....
L 28	B O	Lordsburg x	S Gilbert	L 57 ....
L 29	.....	San Dimas		L 58 .....
L 33	Q	Claremont x	A. N. Leland.	L 59 S W
L 35	Z	Azusa x	I. H. Rogers.	L 60 X
L 39	D I	Duarte x	S. H. Hazeltine	N 41

* Passenger only. † Freight only. ‡ Non-operator. § Operator and ag

National City, July 13, 1887.

Agts., Station Nos. and Telegraph Calls

No. 1.

THERN RAILROAD CO.

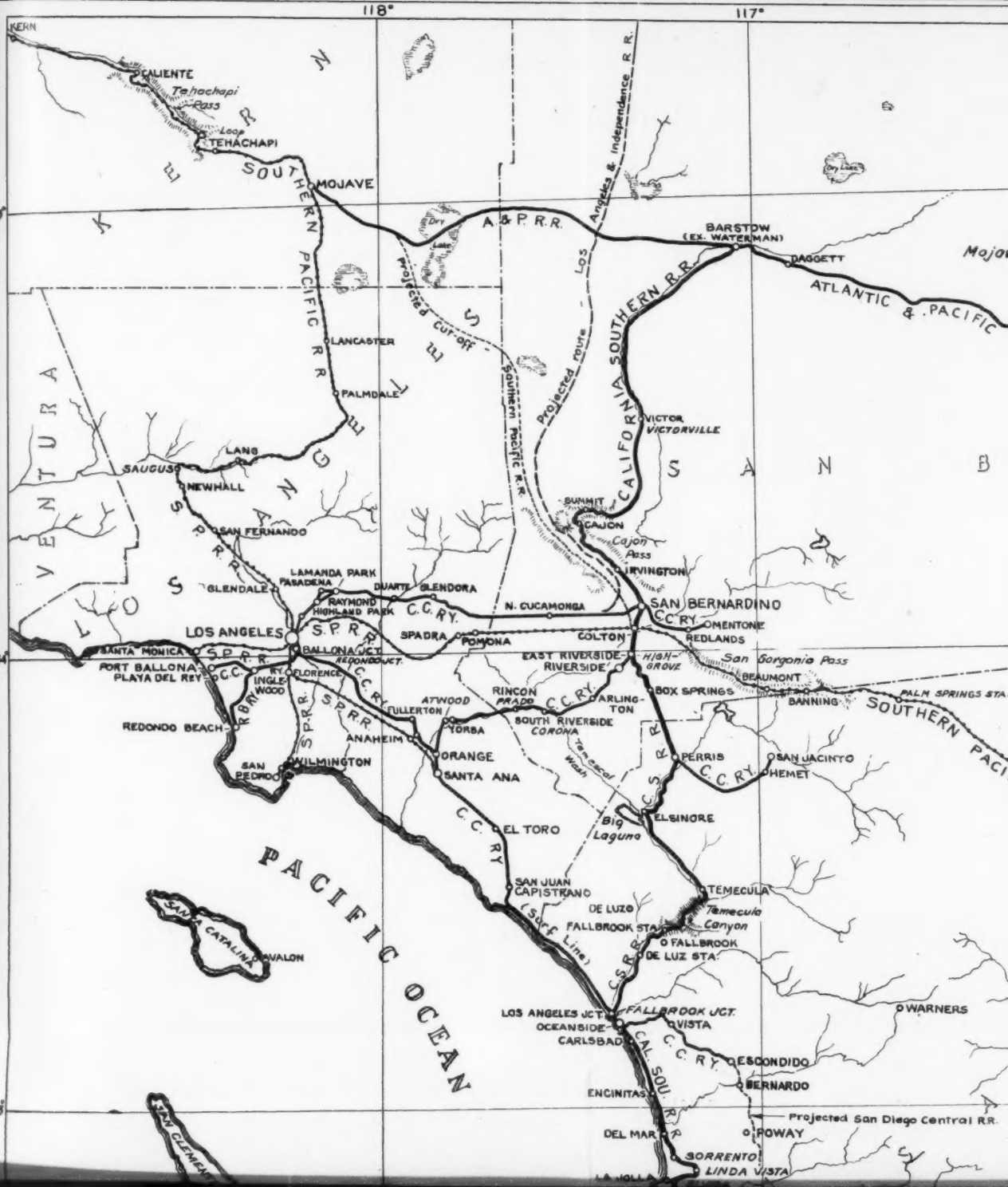
	STATION NO.	TELEG'H CALL	STATION.	AGENT.
			SAN DIEGO DIVISION, Continued.	
	89	.....	Wildomar.....	J. H. F. Scholl.
	93	N O	Elsinore.....	.....
ori	105	P	Perris.....x	C. E. Oyger.
	116	B S	Box Springs.....	.....
	124	J N	Citrus.....	Jas. Clapperton.
Agt.	127	C	Colton.....§	E. B. Stuart.
	.....		.....	.....
	.....		.....	.....
			SAN BERNARDINO DIVISION.	
	131	D	San Bernardino...§	C. B. Hudson.
		D S	San Bernardino....	Train Dispatcher.
	138	X N ‡	Irvington.....	.....
	149	J	Cajon.....	G. P. Replogle.
	156	S U	Summit.....	G. B. Pratt.
	167	.....	Hesperia	.....
	175	V R	Victor.....	C. A. Hobart.
	180	.....	Ono Grande	.....
	191	P O ‡	Point of Rocks....	.....
	209	W O ‡	Cottonwood.....	.....
	212	B A	Barstow.....x	Geo. R. Gooding.

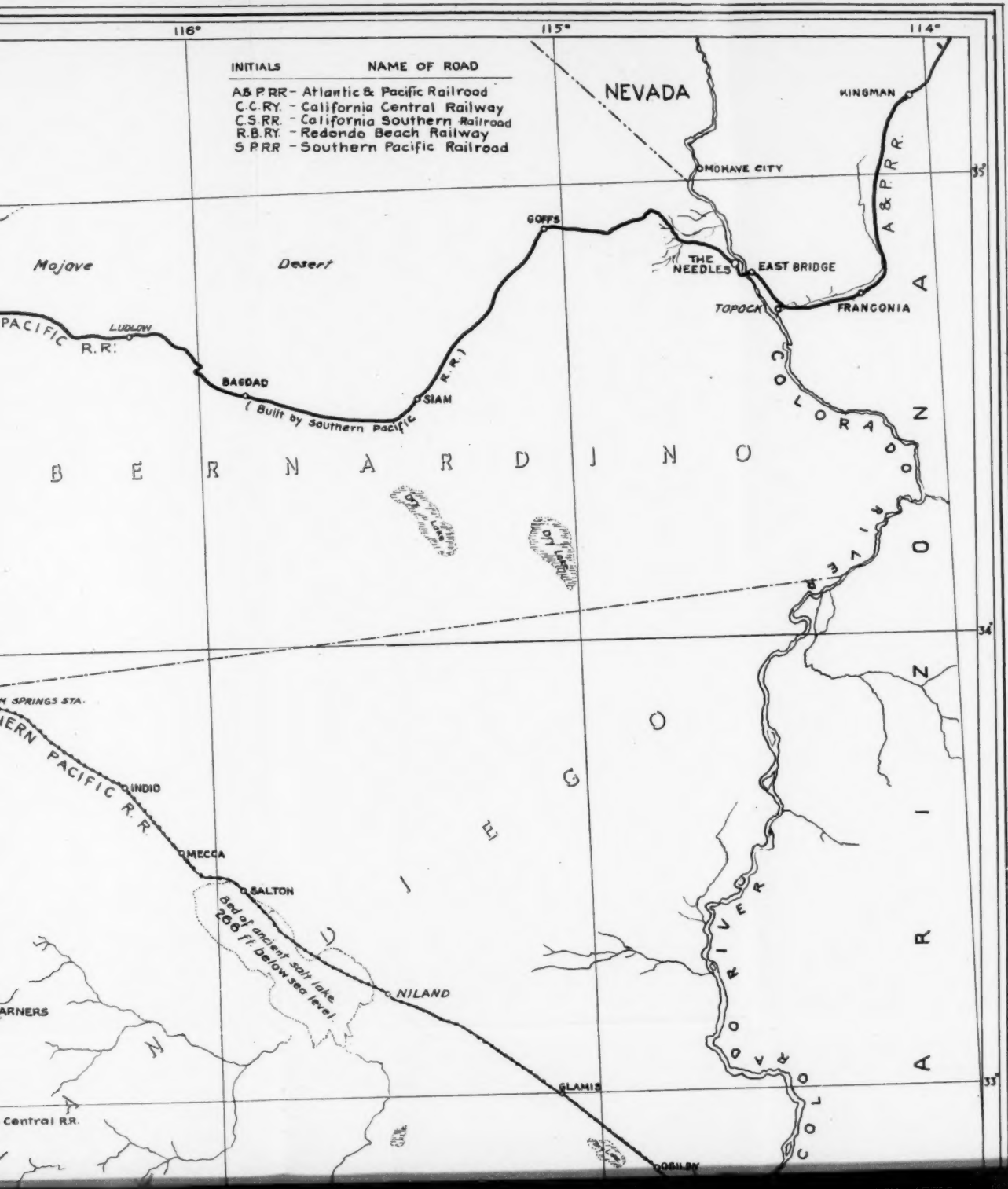
TRAL RAILWAY CO.

			LOS ANGELES DIVISION, Continued.	
	L 41	V A	Monrovia	R. C. Walker.
	L 43	A R	Arcadia.....x	J. E. Valentine.
	L 45	.....	Santa Anita.....	.....
	L 46	.....	Chapman.....	.....
	L 47	S J	Lamanda Park....x	C. E. Hart.
	L 48	.....	Fair Oaks.....	.....
	L 49	M S	Olivewood.....x	F. S. Rockwood.
	L 50	A D	Pasadena .....§	G. B. Ochiltree.
	L 51	.....	Pasadena-Calif St..	.....
	L 52	D	Raymond	G. O. Green.
	L 53	Q	South Pasadena ...x	A. F. McReynolds.
	L 54	....	Lincoln Park.....	.....
	L 55	G A	Garvanza	R. S. Berry.
	L 56	.....	Highland Park	.....
	L 57	....	Sycamore Grove ...	.....
	L 58	.....	Morgan.....	.....
	L 59	S W	Los Angeles-Pass'r *	C. T. Parsons.
	L 60	X	(Los Angeles-Pass'r † (Los Angeles-Pass'r *§	E. Chambers. C. T. Parsons.
		N 61	Los Angeles-Frt. *§	C. T. Parsons.

† Open all night. ‡ Agent Wells, Fargo & Co.'s Express.

Courtesy of R. P. Middlebrook


118°
117°
KERN
CALIENTE
Tehachapi Pass
Loop
TEHACHAPI
SOUTHERN PACIFIC R R
MOJAVE
A & P R.R.
BARSTOW (EX. WATERMAN)
DAGGETT
ATLANTIC & PACIFIC
Los Angeles & Independence R.R.
Projected cut off
Southern Pacific R.R.
Projected route
CALIFORNIA SOUTHERN R.R.
LANCASTER
PALMDALE
VICTOR VICTORVILLE
LANG
SAUGUS
NEWHALL
SAN FERNANDO
SUMMIT
CAJON
Cajon Pass
IRVINGTON
LAMANDA PARK
PASADENA
GLENDALE
RAYMOND
HIGHLAND PARK
DUARTE
GLENDORA
N. CUCAMONGA
SAN BERNARDINO
OMENTONE
REDLANDS
LOS ANGELES
SPADRA
POMONA
COLTON
SANTA MONICA
BALLONA JCT.
REDONDO JCT.
EAST RIVERSIDE-RIVERSIDE
HIGH-GROVE
San Gorgonio Pass
FORT BALLONA
PLAYA DEL REY
INGLEWOOD
FLORENCE
ATWOOD
FULLERTON
RINCON
PRADO
ARLINGTON
BOX SPRINGS
BEAUMONT
BANNING
PALM SPRINGS STA.
SOUTHERN PACIFIC
REDONDO BEACH
ANAHEIM
YORBA
SOUTH RIVERSIDE
CORONA
Temescal Wash
PERRIS
SAN JACINTO
HEMET
SAN PEDRO
WILMINGTON
ORANGE
SANTA ANA
EL TORO
Big Laguna
ELSINORE
PACIFIC OCEAN
SAN JUAN CAPISTRANO
(Surf Line)
TEMECULA
DE LUZO
Temecula Canyon
FALLBROOK STA.
FALLBROOK
DE LUZ STA.
SANTA CATALINA
AVALON
LOS ANGELES JCT.
FALLBROOK JCT.
WARNERS
OCEANSIDE
VISTA
CARLSBAD
ESCONDIDO
BERNARDO
ENCINITAS
Projected San Diego Central R.R.
DEL MAR
POWAY
SORRENTO
LINDA VISTA
LA JOLLA
SAN CLEMENTE

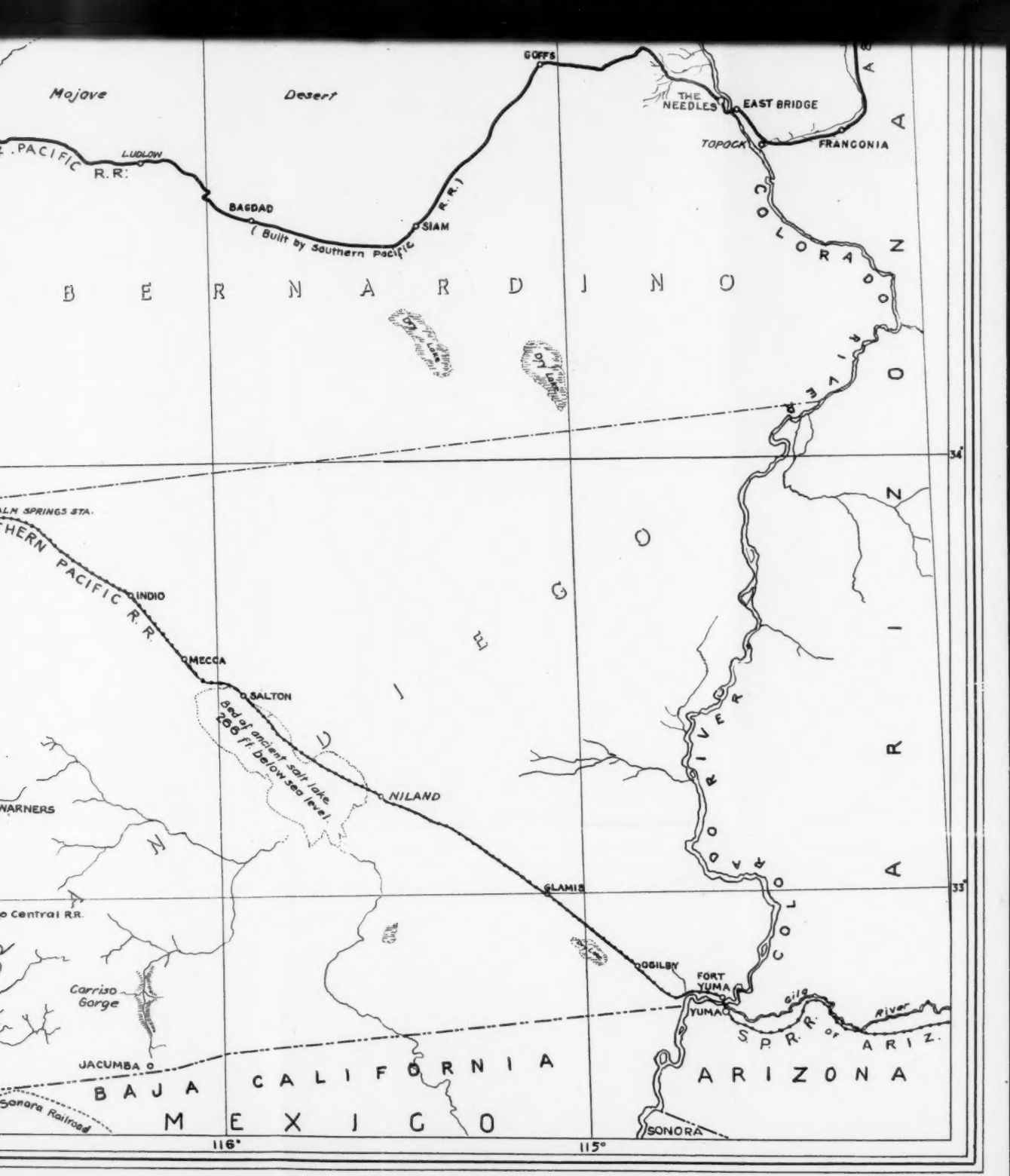

116°
115°
114°
INITIALS NAME OF ROAD
A&P RR - Atlantic & Pacific Railroad
C.C.RY. - California Central Railway
C.S.RR. - California Southern Railroad
R.B.RY. - Redondo Beach Railway
S P RR - Southern Pacific Railroad
NEVADA
KINGMAN
MOHAVE CITY
A & P R.R.
GOFFS
THE NEEDLES
EAST BRIDGE
TOPOCK
FRANCONIA
Mojave
Desert
PACIFIC R.R.
LUDLOW
BAGDAD
SIAM
(Built by Southern Pacific R.R.)
COLORADO
B E R N A R D I N O
Soda Lake
Bristol Lake
COLORADO RIVER
SPRINGS STA.
ERN PACIFIC R.R.
INDIO
MECCA
SALTON
Bed of ancient salt lake 266 ft. below sea level
NILAND
ARNERS
GLAMIS
Central R.R.
COLORADO DESERT
34°
33°

SOUTHERN PART OF CALIFORNIA
SHOWING MAJOR RAIL LINES

TRACED FROM POST ROUTE MAP AND ADAPTED TO YEAR END - 1888.

BY: R.V. Dodge

MARCH 1950


Mojave
Desert
GOFFS
THE NEEDLES
EAST BRIDGE
TOPOCA
FRANCONIA
PACIFIC R.R.
LUDLOW
BAGDAD
SIAM
(Built by Southern Pacific R.R.)
COLORADO RIVER
SAN BERNARDINO
Salt Lake
Dry Lake
34°
PALM SPRINGS STA.
SOUTHERN PACIFIC R.R.
INDIO
MECCA
SALTON
Bed of ancient salt lake 266 ft. below sea level
NILAND
WARNERS
IMPERIAL
COLORADO RIVER
GLAMIS
33°
Central R.R.
OGILBY
FORT YUMA
YUMA
Gila River
S.P.R.R. of ARIZ.
Carriso Gorge
JACUMBA
BAJA CALIFORNIA
ARIZONA
Sonora Railroad
MEXICO
SONORA
116°
115°

December 23, 1851--The Board set April 15, 1852 as the date for the first Annual Meeting of the stockholders, one year after the incorporation April 12, 1851.

The bids for construction, to be submitted on December 24th, were considered by the Board at its meeting *December 26*. In the minutes of the Board there appear a record of construction proposals from contractors for various sections of the line, and it says: "Accepted—Mr. Colton's proposal to build First Section, one fourth cash and balance in stock" (Record Book 101-Page 30—Secretary's Office, C. B. & Q. R. R.)

One wonders why Mr. Colton, who had been most active in promoting the Central Military Tract Railroad, was not a member of the first board of directors of the company. The fact that he chose to enter the contracting business and did secure the contract to build the First Section (out of Galesburg) may be the answer as to why he was not on the original directorate.

At this meeting, December 26th, the board fixed the salary of the Chief Engineer at $2500 per annum, $1000 in cash and $1500 in stock of the company.

Between this date and that of the next board meeting in March, 1852, there was apparently little progress in construction, but growing financial problems, the latter reaching such an acute state that efforts to interest outside capital were made. It was during this time that Mr. Colton made that eastern trip and with representatives of the Aurora Branch and Peoria and Oquawka Railroads, contacted Mr. John M. Forbes, the Boston financier. This meeting opened the way for financial aid and ultimate completion of the Central Military Tract Railroad, but on a route and with connections entirely different from the plan and route on which they were then working.

At a board meeting March 12, 1852 the Chief Engineer, Mr. Whittle, submitted his resignation and on March 13, 1852, the Board "Resolved, that the Secretary be instructed to inform Mr. Whittle that this Board deem it expedient to suspend for the present the engineering operation on the C. M. T. R. R. and that his resignation of this date be accepted." The *Colton Manuscript,* on Page 3, says: "In the Spring of 1852 all operations and surveying was stopped," which is confirmed by the minutes of the Board and sets the date as March 13, 1852, when activities ceased under the original charter.

At this meeting the Board "Resolved, that the Secretary be instructed to write to Messrs. McCay and Loop, contractors, stating to them the financial condition of this company; our inability to pay much until after the next harvest; our intention to apply for a loan from Knox County for $50,000, from Henry County, $25,000. That we are anxious the work should proceed immediately; and that if they will come on with a small force and commence the work the Board will pay 12 per cent interest on what may be done on contracts fulfilled until the amount is paid."

It seems apparent that the promoters of this line were over-zealous in planning to start construction before having sufficient funds to meet obligations that would accrue. This is borne out in the "Colton Manuscript," a report by Mr. Colton to Mr. Charles Perkins sometime in the

'70s (date not definitely known). In that manuscript on page 2 he stated: "It was said by some of the directors that if we could begin work it would attract attention of capitalists. I opposed that movement, but agreed to call a meeting of stockholders, make our statements and leave it to their vote to decide. The meeting was called and the proposition of commencing operations was fully argued. I opposed beginning work without money, and my position was fully sustained . . . I told them I thought I would first find the men who had the money, and then, if I could convince such men that our enterprise was a good one, we could get them to furnish the money to build the road."

It would seem logical to conclude that the date of the Chief Engineer's resignation (March 13, 1852) is the date when "operations and surveying" ceased. It further seems evident that contractors had not yet begun construction under contracts let December 26, 1851. This is evidenced by instructions of the Board to its Secretary, Mr. George C. Lamphere, on March 13, 1852, directing him to urge contractors to "come on with a small force and *commence* the work."

Immediately following Mr. Colton's statement concerning cessation of all work he says: "I went to New York as usual that spring" and speaking of his meeting in Boston with Mr. Wadsworth of the Aurora Branch, and Mr. Grimes of the Peoria and Oquawka, he says: "I remarked that we were each a *director* in a separate railroad." If this statement is correct, then that meeting in Boston occurred after April 15, 1852, as it was at the stockholders meeting on that date that Mr. Colton was *first elected a director* of the Central Military Tract Railroad Company, at which time the full complement of thirteen directors was chosen.

It matters not that, some twenty-five years later, two of the most prominent men, Messrs. Joy and Colton, engaged in the development of plans for the Central Military Tract Railroad, should hold different views as to the origin of the project that was later to become the nucleus of the great Burlington System.

Sufficient it is, that following Mr. Colton's trip east "in the spring of 1852" we find both of these men working shoulder to shoulder in the accomplishment of the plan which was completed some three years later, March 17, 1855, much of the credit for same resting with these two men.

April 29, 1852, the Board instructed the Executive Committee, (Messrs. Colton, Bunce and Willard) "to prepare a Bill to go before the Legislature for a new or amended charter . . ." Among the other things the proposed bill was to give to the railroad "absolute self control as to rates and fares, for our company free from all subsequent legislation." Also the new or amended charter was to contain certain provision as to route so that the road could "connect with *any railroad leading to Chicago.*"

The Legislature was not to convene until June 1852, giving ample time for preparation of the bill. The provision "to connect with any railroad," etc. was a bit of real foresight, for the extension of the Aurora Branch Railroad to Mendota, although proposed, was not authorized until June 22, 1852.

The period between April 29 and July 31, 1852, the date of the next directors meeting was one of great activity. Mr. Colton had made his "trip east," had with the other members of the executive committee prepared the bill as directed April 29, 1852, submitted it to the State Legislature and obtained its passage June 19. In addition Mr. Colton and Mr. Bunce went to Quincy and negotiated an agreement with the Northern Cross Railroad by which a connection between the two railroads would be made at Galesburg, where the Central Military Tract Railroad ended, by which a direct line between Chicago via Galesburg to Quincy would result, and no competitive line built. At the Board Meeting July 31, Mr. Colton presented this agreement which was approved.

The amended charter, ordered at the board meeting April 29, 1852, and passed by the Legislature June 19, 1852, was submitted, accepted and approved, July 31, 1852.

Section 2, of the amended Act, gave the road the "Right to construct a line from Galesburg, northeasterly—towards the City of Chicago to a point—on or near the line of the Chicago and Rock Island Railroad Company, or *on or near the line of any other Railroad or Railroads.*"

Section 4, provided "That the capital stock of said company shall be one hundred thousand dollars, which may be increased from time to time by a vote of the majority of the stockholders."

Section 5, stated "That the board shall consist of thirteen stockholders," also that "until the first Wednesday in June, 1853, the board of directors shall consist of William McMurtry, George C. Lamphere, James Bunce, Silas Willard, Chauncy S. Colton, Edwin G. Ellett, Edward Hollister, Amos Ward, Sylvester Blish, Barney H. Jackson, Myrtle G. Brace, William Maxwell, and Alfred Brown."

It is evident that following the passage of this act of June 19, 1852, Mr. Joy took up in earnest the promotion of the Central Military Tract Railroad, for in the Burton Historical Collection at Detroit, Michigan, is a record of testimony of Mr. Joy in a suit of Asabel Enigh - vs - C. B. & Q. R. R. Co. dated November 10, 1860. In his testimony Mr. Joy stated: "Soon after the session of the Legislature at which the charter was amended, and on the eighth day of August, 1852, I went to Galesburg and made a contract with the parties who then controlled the Military Tract R. R. Co., by which my friends were to have control of the stock in that road, and have control of the board. I should have said, that before I went to Galesburg, on the 7th day of August, 1852, having had an understanding with Copeland, (Colton) and others, who controlled that road; then immediately after the Legislature adjourned, I went to New York and to Boston, to place the matter before our friends there, and got their subscriptions. The original subscription list I now hold in my hands, dated July 12, 1852. It was after that, that I went to Galesburg and made a contract above alluded to . . ."

At this meeting in Galesburg, August 8, 1852, Mr. Joy was accompanied by Mr. J. W. Brooks, superintendent of the Michigan Central Railroad Company, and here it was, that the provision by which eastern financial aid would be forthcoming, was announced. This was, that local parties would raise $100,000 in stock subscriptions, this Mr. Joy said

"was a very large amount to be raised there at that time," and the length of time for doing so was all too short.

It is interesting to note that while the board appointed in the Act of June 19, 1852, was to serve "until the first Wednesday in June, 1853," at a meeting September 21, 1852, a call was issued for "a meeting of stockholders, Thursday, the 14th day of October, next, to vote on an increase of the Capital Stock of the said Company, and to elect directors for the *remainder of the current year.*"

Prior to the Stockholders Meeting on October 14, 1852, the board "ordered that books be opened to receive subscriptions to the Capital Stock of said company to the extent of six hundred thousand dollars," indicating that the one hundred thousand dollar capitalization authorized by the Act of June 19th was quite inadequate. On this date, October 14th, ensued the first Stockholders meeting which, together with a meeting of the newly elected board, was one of crucial importance to the road. It marked the entrance of eastern capitalists, and their taking over the control of the project.

At this meeting, holdings of stock in the new company showed a total of 534 shares, distributed among nine persons. Following the report of shares represented "in person or by proxy" it was "Resolved, that the capital stock of the company be raised to the sum of $800,000," some $200,000 more than the board had, but a short time before established.

Then occurred the entrance of eastern interests represented by James F. Joy and Henry Ledyard of Detroit, Michigan, who reported that they represented, personally and by proxy, 2185 shares of stock subscribed, to be effective only if the local people took the $100,000 in stock, demanded by the eastern capitalists.

On a ballot for Directors for the remainder of the current year the result was: 2185 votes cast for each of the following persons: J. W. Brooks, Henry Ledyard, J. F. Joy, G. V. N. Lothrop, I. H. Burch, G. C. Hammond, John H. Kinzie, C. S. Colton, W. S. Gale, Silas Willard, J. Bunce, Wm. McMurtry, and John H. Bryant.

The minutes of the stockholders meeting show that all the eastern stock was voted for the above board members, and that the remaining stockholders present and representing 534 shares *declined to vote their stock.* There is nothing in the minutes to show reason for their declining to vote.

The local subscription list proved to be about $50,000 short of the amount that had been set by the eastern interests in order to assure their financial aid. It was at this crucial moment that Mr. Colton and Mr. Willard offered to subscribe for $50,000 of the stock, about which Mr. Joy, years after, in 1875 at the time of his retirement from activities in the Burlington recognized Mr. Colton's subscription and loyal service to the Company in the following:

> "You, yourself, Mr. Chairman, was one of the early subscribers, and to my amazement you subscribed $25,000 far down in the country, for an enterprise, such as you never before engaged in; the encouragement which you gave us at Galesburg, was what enabled

us, after all, to carry this enterprise through. You stood by us like men; you put in your money to the extent of your ability—far more, in proportion to your means, than any man in New York or New England; they put in of their abundance, and small amounts of their abundance, but you, with your comparatively small means, gave all that was in your power to give."

Following the stockholders meeting, the newly elected board met and organized. David Sanborn was elected Secretary, and John W. Brooks was elected President of the Board and of the Company.

Messrs. Brooks, Ledyard and Joy, all of Detroit, were appointed a committee to select and employ a Treasurer. Messrs, Brooks and Ledyard were appointed to employ a Chief Engineer. The Board also "Resolved, that no more than five per cent or five dollars, per share be made in any one month" shall be assessed. It was also "Resolved, that the office of Chief Engineer, during construction, be located at Princeton," being located about midway between the two termini.

By Resolution, Mr. J. W. Brooks, just elected President, was appointed consulting engineer. A short time later, Mr. J. M. Berrien, an associate of Mr. Brooks, in Detroit, and an engineer of considerable repute was appointed Chief Engineer in charge of construction of the road. About this time the Chief Engineer of the Chicago and Aurora Road resigned, and no one was appointed to succeed him. Although at that time, according to the records, Mr. John Van Nortwick was acting as consulting engineer of the road.

Mr. Barrien certainly had much to do with its construction, for the standards which he adopted and applied to the Central Military Tract Railroad, were also applied to the Chicago and Aurora Railroad in its building. As is evidenced by structures designed and built at that time, that are still in service.

In fact, while these were two separate companies, their policies were directed by the same men, and Mr. Berrien really performed the duties of Chief Engineer on both roads, spending part of his time in the headquarters at Chicago. There he designed and built a vault in the General Office at the foot of South Water Street in 1853 or 1854, which was so fire proof that it withstood the "Great Fire" of 1871. Altogether, it is evident that Mr. Berrien had a large part in the engineering activities on the entire line from Chicago to Galesburg, until he returned to Detroit in 1856 to become Chief Engineer of the Michigan Central Railroad.

Reverting to the Central Military Tract and to that eventful meeting of October 14, 1852, which really assured the construction of the road.

The Board authorized the President and Treasurer "to issue Bonds of this Company to an amount not exceeding eight hundred thousand dollars." Messrs. Brooks and Ledyard were "appointed a committee to prepare a form of Mortgage and Bond," as well as a committee to dispose of these bonds. They were also authorized to "purchase Iron (rail) and machinery for the road."

From the foregoing, it will be seen that Mr. Joy, Mr. Brooks and Mr. Ledyard, all from Detroit, came to this meeting on October 14, 1852, representing the Forbes' interests with a programme fully mapped out, and which was as fully carried out. Between this date and June 1, 1853 there appears no record of directors meetings, and it is assumed that local representatives undertook the responsibilities of carrying out that programme.

President Brooks was not at the stockholders meeting on June 1, 1853 and Ex-Governor McMurtry, a director, was chosen President, *Pro tem.* At this meeting Mr. Joy cast the votes of the 2360 shares held by the Forbes' interests and the local stockholders cast votes for their 800 shares, in electing a new board of directors. The personnel of the board was unchanged from the one elected October 14, 1852, with one exception. Mr. John F. Bryant, of Princeton, Illinois, was succeeded by Mr. I. F. Dunn of Galesburg.

At this meeting, by resolution, the capital stock of the company was increased from $800,000 to $1,000,000. Following adjournment of the stockholders meeting, the Board convened for organisation. Mr. Brooks was re-elected President and Mr. Sanborn re-elected Secretary. Mr. Brooks was authorized to dispose of unsold shares of Company stock, with provision "that it be sold at not less than par."

At a board meeting July 1, 1853, Messrs. Joy, Gale and Brooks were authorized "to negotiate business connection at Galesburg with the Peoria and Oquawka Railroad Company; also for business connections with Chicago and Aurora, and Northern Cross Railroads." Of especial interest is a condition that the Central Military Tract Railroad assumed to "bind this company not to aid or assist in the construction of any rival railroad to any part of the Peoria and Oquawka Road, striking the Mississippi River, within thirty miles of Burlington or Oquawka."

It was at this time that Peoria and other eastern interests sought legislation for the building of a branch from the Peoria and Oquawka at Farmington to Warsaw on the Mississippi River. Their belief was, that a coalition of the Peoria and Oquawka with the Central Military Tract and Chicago and Aurora Railroad would divert much of the railroad traffic east-bound through Galesburg to Chicago, to the detriment of their proposed line eastward across the State of Illinois to the Indiana State Line. That such possibility had become evident to Mr. James C. Grimes of the Peoria and Oquawka Railroad is borne out by Mr. Colton's statement in the "Colton Manuscript" which says:

> "Mr. Grimes being connected with the Peoria and Oquawka Railroad Company; and knowing that the construction of such a proposed railroad (via Galesburg, Mendota, and Aurora to Chicago) would take all the business from Galesburg and West to Chicago instead of Peoria and that knowledge of such a scheme would injure him personally, insisted that his name should not be publicly connected with the project."

i.e., the consolidation of roads to form the C. B. & Q. R. R. as proposed at the Boston meeting in the "Spring of 1852."

At this board meeting, July 1, 1853, authority was given officers of the Company to subscribe for stock in the Northern Cross Railroad Company, "not to exceed in all the sum of eighty thousand dollars ($80,000)" under provisions of an Act, passed February 10, 1853, authorizing both the Chicago and Aurora and the Central Military Tract Railroads to subscribe for amounts "not exceeding ten per cent of the Capital Stock of each of the said companies so subscribing."

At this meeting J. E. Thayer and Brother, Boston financiers, were appointed transfer agents of the Company, and the President and Treasurer were authorized to "issue bonds of the Company, in an amount necessary to the completion of construction of the line."

The stockholders meeting called for June 7, 1854, because of lack of a quorum was adjourned daily until June 12, 1854, when a quorum was present, in person or by proxy with a total of 4270 shares represented.

On the vote for directors for the ensuing year 3473 shares of the eastern interests and 700 shares of the local interest were voted for Messrs. Brooks, Burch, Ledyard, Hammond, Kinzie, Bunce, Willard, Colton, Gale, McEnlear, Selden, Lathrop, and Joy. On this day the newly elected Board met to organize, and re-elect James W. Brooks, President.

At the Board meeting October 25, 1854, Mr. Joy submitted a contract between the Peoria and Oquawka and Chicago and Aurora and Central Military Tract Railroads by which aid would be furnished by the two latter companies for completion of the Peoria and Oquawka from Galesburg to East Burlington, certain securities being exchanged, and a lease of the line taken. It was understood that the total amount of aid would not exceed $150,000. In the meantime construction of the Central Military Tract Railroad, which had begun following the important stockholders and directors meetings of October 14, 1852, was rapidly nearing completion, which was accomplished December 7, 1854. With the Chicago and Aurora "extension" already completed and in operation since October 23, 1853, and the Central Military Tract Road completed and in operation since December 7, 1854, the plans for their consolidation were being perfected.

At a directors meeting March 1, 1855, Mr. Charles G. Hammond was appointed superintendent in charge of both the Chicago and Aurora and the Central Military Tract Railroads, and Mr. Amos T. Hall was appointed Treasurer of both lines. Authority was given the President "to purchase $50,000 of Northern Cross Railroad Bonds each year beginning January 1, 1857" provided the Chicago and Aurora would do likewise.

There being no quorum present for the annual stockholders meeting called for June 6, 1855, daily adjournments were taken until June 12, 1855, when a total of 2391 shares was represented and cast for the following directors: Messrs. Brooks, Hammond, Willard, Burch, Kinzie, Colton, Selden, Ledyard, Bunce, G. W. Gale, Lothrop, W. S. Gale and Joy. By resolution the Capital Stock of the Company was increased from one million to two million dollars. Following the adjournment of stockholders meeting, the newly elected board convened for organization.

Mr. J. W. Brooks was again elected President and Mr. David Sanborn re-elected Secretary.

The railroad, now in operation, was apparently doing a good business, for at a meeting January 4, 1856, the board declared a dividend of ten dollars per share "payable out of net earnings of the last eight months." The dividend was payable in stock of the Company, leaving the cash available for current obligations, for there was at that time a rather large floating debt.

At the board meeting March 12, 1856, the President and Treasurer were authorized to issue bonds of the Company to an amount not exceeding $350,000 to pay *floating debt*.

At the next annual stockholders meeting June 4, 1856, 3107 shares of stock were represented and votes cast for the board for the following year. Those elected were Messrs. Willard, Selden, W. S. Gale, G. W. Gale, Brooks, Burch, Ledyard, Porter, Baldwin, Colton, Bunce, Joy and Trowbridge.

Following adjournment the newly elected board met to organize. At this meeting Mr. James F. Joy, then President of the Chicago, Burlington and Quincy Railroad was elected to the Presidency, a further move toward consolidation with that road. Mr. Brooks had previously tendered his resignation as President as had also Mr. Hammond as a director.

A resolution was passed "Authorizing the President to assent to any proposition for consolidation of this Company with the Chicago, Burlington and Quincy Railroad Company." The basis was for consolidation on equal terms, which required an addition of twenty per cent to the then capitalization of the Chicago, Burlington and Quincy Railroad.

At a stockholders meeting held on July 9, 1856, in the City of Chicago, it was voted to effect the consolidation, there being 10,386 votes for and 184 votes against same. At the directors meeting which followed, stock subscriptions to the amount of 76 shares were declared forfeited, because of failure to respond to calls for payments. Also "a dividend of three per cent was declared, payable on August 15th next."

With the articles of consolidation approved and ratified, the Central Military Tract Railroad Company passed out of existence, becoming an integral part of the Chicago, Burlington and Quincy Railroad Company.

Preceding papers by Mr. Newton have appeared in the following:

Bulletin 74—The Aurora Branch R. R. Co., 1849-1852
Bulletin 76—The Chicago & Aurora R. R. Co., 1852-1855
Bulletin 78—The Chicago, Burlington & Quincy R. R. Co., 1855-1856

Locomotives of the Panama Railroad

By Alexander Saunders

In Bulletin 78, I presented a brief history of this railroad enterprise and in this article, we will touch on the locomotives of this road, both prior to and during government control as well as those of the French Canal Company and the Isthmian Canal Commission (I. C. C.).

The first record that we have of any locomotives for this road, were a group of four or five, 4-4-0 locomotives, built by Niles & Co., Cincinnati, Ohio to a design furnished by George Escol Sellers. In order to surmount the proposed grades, it was felt that additional power must needs be furnished. These locomotives, as shown in the sketch, had two pairs of cylinders, one above the other, the lower pair being connected in the usual fashion to the drivers but the upper pair transmitted their power through beveled gearing to wheels which gripped a middle rail, the latter being set four inches higher than the regular rails. With the establishment of moderate grades, the use of the gearing became unnecessary. Whether these locomotives were rebuilt to conform to the regular pattern, we do not know, but it would not seem unlikely, neither do we know anything further relative to their disposition.

The next group of locomotives also came from Niles & Co., and these too were of the 4-4-0 type, woodburners of the 1850 period, inclined cylinders, short wheel base, reported as weighing seventeen tons and capable of pulling seven loaded cars over the road. We do not know how many were in this group and the disastrous fires in Colon that destroyed the records has removed all possibility of tracing these locomotives.

The next group of locomotives came from the Portland Company, Portland, Maine. The first, the "Neuva Granada" left the works on October 26, 1852, inside connected, followed by two others, outside connected. Up to 1873, the Portland Company delivered a total of twenty locomotives to the Panama Railroad, all of the 4-4-0 type save four 0-4-0's. These were typical Portland engines of the period and they gave wonderful service and we have no record of their disposition but they must have been in service during the Hatch-Stockwell regime of the 1870's.

An examination of the Portland records yields one point of interest. The Panama Railroad has always been considered a 5′ gauge road but—the first ten locomotives were built for a 5′ 6″ gauge. Altho' a careful search has been made in the remaining files of the company, there is nothing to confirm the fact, other than these Portland records which are still in existence and have always been found to be correct. The last engine built to 5′ 6″ gauge was the "Barbacoas" under date of August, 1856 and the first of the 5′ gauge locomotives was the "Atlantic" completed in April, 1865. During those nine years, the gauge could easily have been changed and the first locomotives altered to suit the change. One wonders at its necessity. There is also the possibility of a third rail being used but this seems doubtful. One more, the "Isthmus," an 0-4-0 from Rogers in 1858, and this completes the locomotives up to the time the French took control.

Of the Hinkleys, we learn that seven were built in 1883, the only photograph available is that of the No. 5, "Reclus." These show a locomotive of the 0-6-0 tank type and they must have held up well since they were used in the construction of the canal. However, tenders were added so that more fuel and water could be carried without halting for that purpose.

A group of twenty-six similar locomotives were received from the Rogers Works in the early eighties. The majority of these engines were repaired and rebuilt by the I. C. C. and at least one, the No. 12 was equipped with a tender. However, there are no records of the 4-4-0 engines seeing service up to this time.

Six locomotives of the 4-4-0 type and five of the 0-4-0 type came from the Baldwin Works in the eighties. Some of these were not put up for sale until 1911. Subsequently, forty of the 2-6-0 type were purchased in 1907 and at least ten of these were transferred to the P. R. R. in 1913. They were well liked by the men and turned in a good performance.

The Cooke Works delivered seventeen of the 4-4-0 type in 1883 and they survived to build up a good reputation for themselves during I. C. C. control. Nos. 27 and 36 were transferred to the P. R. R. in 1913 and were used on the pay car and sight-seeing trains. In 1906, 100 locomotives of the 2-6-0 type came from these works, the largest single order ever placed by the P. R. R. They gave good service for years and three are still in service (March, 1948) but all are slated to be scrapped. Many of these engines were sold to Alaska.

In 1905, 24 locomotives of the 2-6-4T type were delivered from the Schenectady Works. Great results were expected of these engines, ordered by Mr. Wallace. However, the frames extending the full length of the engine and tender made them so rigid that they would not stay on the rough track of the diggings. They were tried in passenger service and were a failure. In 1909 they were rebuilt to the 2-6-0 type, tenders built to two specifications; Nos. 101-112 had sloping tanks and Nos. 113-124 had the rectangular tanks; subsequently, they were used indiscriminately. In 1917, two were sold to the Chili Exploration Co. and later, the A. B. Shaw Co. sold the same organization 18 more. "Old timers" are quite certain the other four also went to Chili.

In 1908, the Brooks Works delivered 20, 2-6-0 locomotives to the I. C. C. and 12 to the P. R. R. They were easily the favorites of the engineers and, altho' built to haul the dirt trains, they saw every type of service, including passenger and they performed well. Those on the P. R. R. were in continuous daily dual service from the date of their delivery to 1940 when ALCo. built five passenger engines to replace them. They were superheated and altho' they carried 50 pounds less pressure than the new engines, they could handle a long train at a speed that no other class could duplicate. The No. 652 holds the record of handling the longest passenger train of 19 or 20 coaches, ever pulled by one locomotive across the Isthmus.

Of the last group of locomotives, these are also of the 2-6-0 type but, unfortunately in a wave of economy, the road reduced the size of the

cylinders and the tenders, as specified by the builders, with the result they have never equalled the performance of the Brooks engines in the number of cars carried and they have to stop for water.

The next group of locomotives were five G. E. Diesels of 1000 HP. Altho' they seem to be able to move a heavy load, they can't get it over the road and the next order was for steam locomotives.

The next group of engines were of the 2-6-0 type and came from the H. K. Porter Co., in 1942. These have the greatest tractive effort of any steam engine. They are not a fast locomotive but they can do a good job in steady running. Stacks from the builder have been changed, because of superheater trouble, to conform to the Brooks engines and, curiously enough, the bells are being replaced with those from the Cooke and Brooks locomotives.

Incomplete records prevent us from giving complete information on all of these locomotives but the following may be of interest:

In 1907, the total number of locomotives used by the P. R. R. and I. C. C. were—124 of 5′ gauge and 9 Decauvilles, the total number of French engines; 100 Cookes of the 201 Class; 40 of the Baldwin 301 Class; 20 Brooks of the 601 Class and 4 Porters of 36″ gauge.

In 1908 12 Brooks of the 651 Class were delivered for dual service and 12 of the 201 Class were taken out of road service and placed in yard and switching service for which they were intended. Also, 4 18 ton narrow gauge engines were received from Davenport for work at Miraflores together with 35 cars.

In 1913 ten of the Baldwin 301 Class were transferred to the P. R. R. together with Nos. 209 and 285, both from Cooke. Also Nos. 27 & 36, both 4-4-0 Cooke locomotives were retained for the pay train and sightseeing trains.

Sales of equipment seem to have started about 1913 and during that year the Pacific Ry. of Costa Rica purchased 6 dump, 6 flat and 2 Porter locomotives, all 42″ gauge. The Northern Ry. of Costa Rica purchased 41 dump, 7 flat and 8 Porter locomotives, all 42″ gauge. The United Fruit Co. in Costa Rica purchased 6 Porter locomotives of 36″ gauge for use in Bocas del Toro and R. W. Hebard Co., of Panama purchased the 2 electric locomotives of 36″ gauge used on the industrial railway at Gatun.

A report of July 25, 1917 lists the following sales and transfers: 10 locomotives were transferred to the Alaska R. R.; 2 sold directly to the Chili Exploration Co. and 95 sold to the A. B. Shaw Co., Chicago. The latter sold 18 to the Chili Exploration Co., the remaining 77 were sent to New York. The locomotives sold the Shaw Co. were all 5′ gauge and included 22 of the 201 Class; 38 of the 301 Class and 13 of the 601 Class. The remaining four may have been the rebuilt Schenectady engines, if the claim the Chili company purchased all 24 of them is correct, purchasing 22 from the Shaw Co.

In January, 1922, the Alaska Engineering Co. purchased 7 of the 601 Class and 17 of the 201 Class, a total of 24. The A. B. Shaw Co. is shown as receiving four of the Schenectady locomotives, the U. S. War

Dep't. purchased 9 of the 201 Class and the Equitable Equipment Co. of Pennsylvania purchased 15 of the 201 Class. Changes in the gauge were made by the Panama Railroad before the locomotives were shipped.

The records are not clear in the matter of the locomotive numbers that were shipped but here are some of them:

Alaska Engineering Co.—
208, 221, 224-225, 239, 242, 247, 265-266, 270, 272, 275, 277, 280, 285, all Cooke.
601, 606, 610, 614, 618, 620, 605, all Brooks.

Chili Exploration Co.—
103, 106-113, 115-124, 104, all Schenectady.

U. S. War Dep't.—
209, 233, 235-236, 243, 245, 253, 260, 271, 276, 297, all Cooke.

Army Quartermaster—
301-303, 305-311, 313-314, 316-319, 321, 323-339, 304, 312, all Baldwin.

Equitable Co. of Penna.—
201, 212-213, 217, 223, 227-229, 244, 250, 254, 258, 267, 283-284, all Cooke.

A. B. Shaw Co.—
101-102, 105, 114, all Schenectady.
205-206, 210-211, 218-220, 222, 246, 248, 249, 257, 259, 262-263, 268, 273, 279, 282, 288-289, 298, all Cooke.
315, 322, 340, all Baldwin.
602-604, 607-609, 611-613, 615-617, 619, all Brooks.

The Brooks locomotives were subsequently sold to the Grand Trunk Western Ry. in 1917 where they were converted to standard gauge and renumbered as follows:

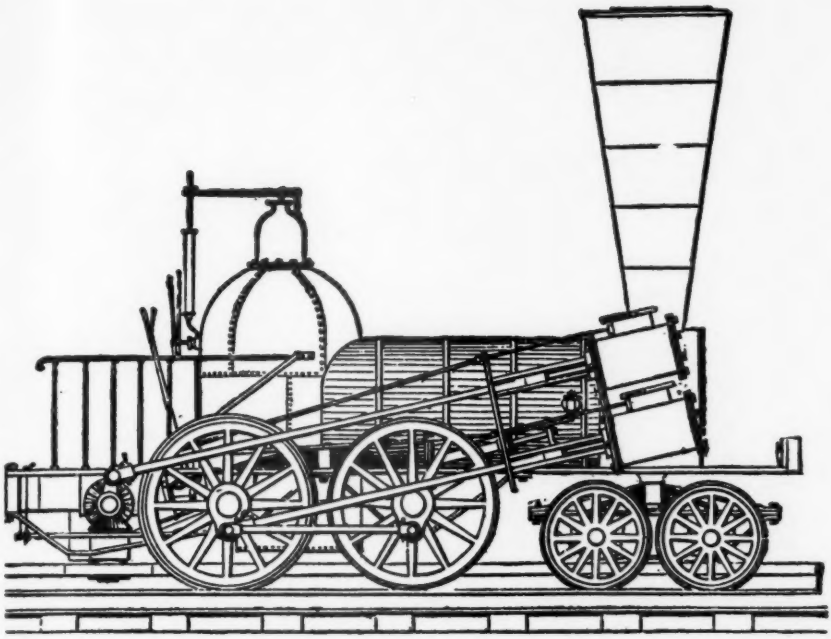
P. R. R. #	G. T. W. #	C. N. R. #
602	1100	890
603	1101	891
604	1102	892
607	1103	893
608	1104	894
609	1105	895
611	1106	896
612	1107	897
613	1108	898
615	1109	899
616	1110	900
619	1111	901

All locomotives were scrapped in 1934 by the C. N. Rys., save Nos. 892 and 893 and they were sold in 1934 to the Detroit, Caro & Sandusky Ry.

Grouping the locomotives by types, a roster of the Panama Railroad locomotives would be as follows:

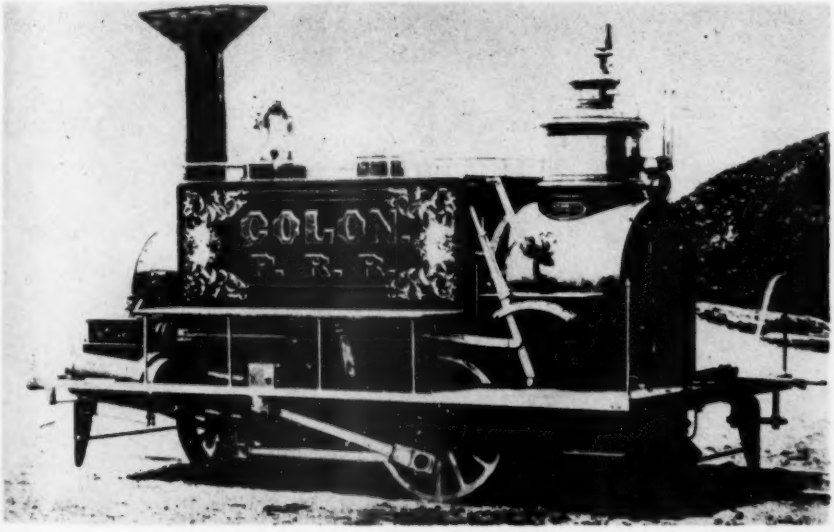
0-4-0 Type

Colon	Portland	#136	8-21-1865	12x18"	42"
Chiriqui	Portland	#148	9-18-1867	12x18"	36"
Darien	Portland	#149	11- 6-1867	12x18"	36"
Veragues	Portland	#261	5-22-1873	12x18"	42"

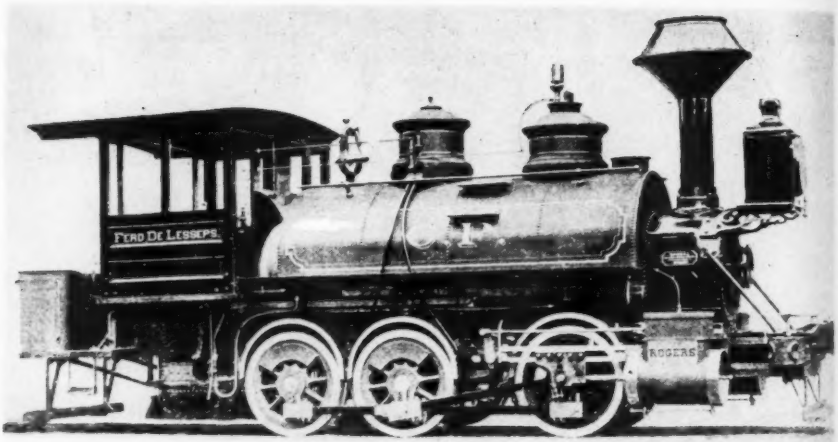


One of the early Niles engines with bevel gear.

Courtesy of W. A. Lucas

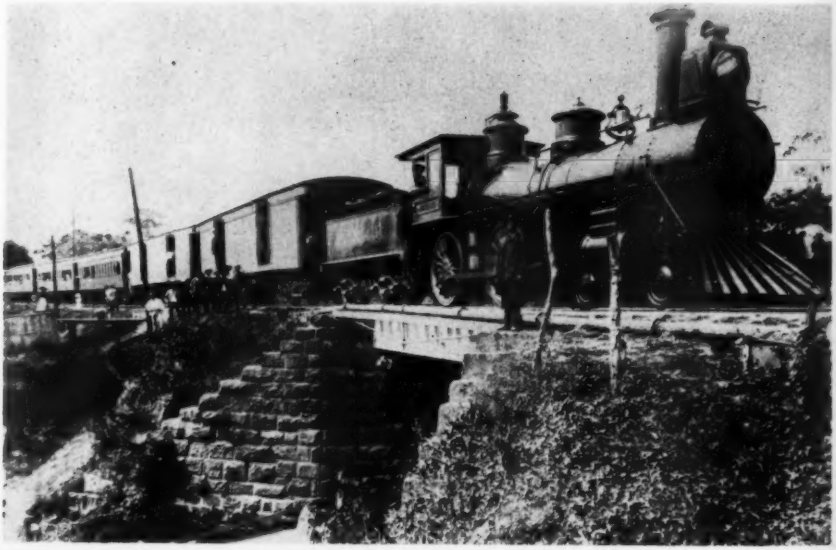


P. R. R. "Colon" Portland #136, 1865, left hand drive.



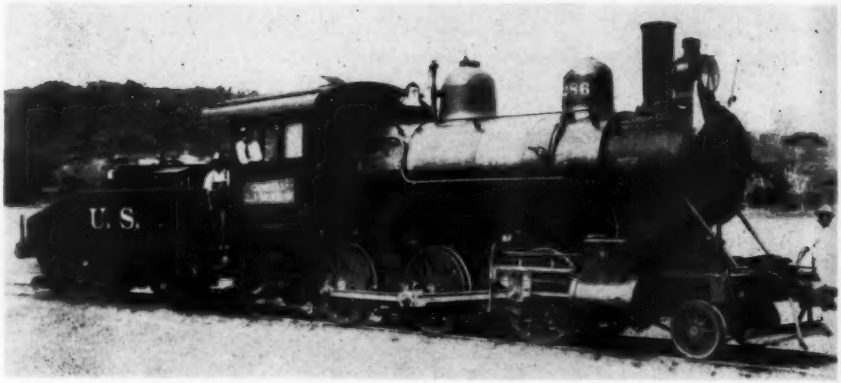
Courtesy of W. A. Lucas

P. R. R. Ferd De Lesseps, Roger #3164, 1882. Renamed "Meuse."

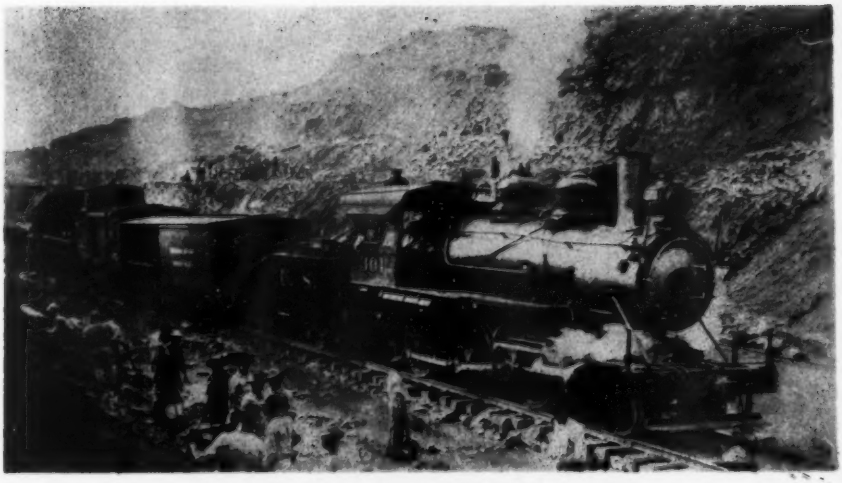


P. R. R. #51, "Le Mares," Cook #1529, 1883 at Frijoles. The station was just a little to the left of this picture, people had to walk to it, note path.

I. C. C. #264, Cooke #39175, 1906, 19x24" 54" 124500.



U. S. #286, Cooke #39197, 1906.



U. S. #301, Baldwin #30051, 1907, 19x24" 54" 122310.

A photograph of the "Colon" shows the engine equipped for left hand drive. It seems doubtful if the others were similarly arranged.

14x22" 36" 50000 lbs. 13287 lbs. T. F.

24	Baldwin	#5330	10-1880	31	Baldwin	#7248	4-1884
25	Baldwin	#6247	6-1882	?	Baldwin	#8859	10-1887
28	Baldwin	#6852	7-1883				

Renumbered under U. S. control 1-5. All were rebuilt with diamond stacks but subsequently changed to the straight pattern. Carried 780 gals. water, 1,100 lbs. coal. Wood cab, saddle tank, Stephenson valve gear and would handle 2,040 tons on the level.

Isthmus	Rogers	#814	2-18-1858	11x22" 54"

0-6-0 Type

15x22" 44" 60000 lbs. 12000 lbs. T. F. 130#

1	Meuse	Rogers	#3164	12-30-1882	Orig. named Ferd. de Lesseps
2	Gironde	Rogers	#3165	1- 3-1883	Orig. named V. Dauzats
3	Moselle	Rogers	#3167	1- 4-1883	Orig. named A. Richier
4	Garrone	Rogers	#3170	1- 8-1883	Orig. named G. Saleta
19	Yar	Rogers	#3359	9-20-1883	
20	Dardogne	Rogers	#3360	9-20-1883	
21	Allier	Rogers	#3370	9-29-1883	
22	Cher	Rogers	#3371	9-29-1883	
23	Loiret	Rogers	#3378	10-12-1883	
24	Aube	Rogers	#3379	10-12-1883	
25	Aisne	Rogers	#3380	10-15-1883	
26	Ain	Rogers	#3381	10-15-1883	
27	Yonne	Rogers	#3387	10-23-1883	
28	Orne	Rogers	#3388	10-24-1883	
29	Aude	Rogers	#3389	10-24-1883	
30	Gard	Rogers	#3390	10-25-1883	
31	Creuse	Rogers	#3396	10-30-1883	
32	Indre	Rogers	#3397	10-30-1883	
33	Doubs	Rogers	#3398	10-30-1883	
34	Mayenne	Rogers	#3399	10-30-1883	
35	Oise	Rogers	#3402	11- 9-1883	
36	Lot	Rogers	#3403	11- 9-1883	
37	Ariege	Rogers	#3406	11-10-1883	
38	Aveyron	Rogers	#3407	11-10-1883	
39	Ardeche	Rogers	#3408	11-12-1883	
40	Vienne	Rogers	#3409	11-12-1883	

The above were ordered by the French Company. Seventeen were taken over by the U. S., 14 of them working on the Panama Railroad, the others for the I. C. C. The numbers used by the P. R. R. commenced with 8 and were staggered to 20, the I. C. C. numbered them from 453-499, in the same manner.

These engines could handle 1740 tons on a level stretch, they carried 965 gals. water and 2,000 lbs. of soft coal.

15x22" 42" ——— 10000 lbs. T. F. 130#

5-11 Hinkley 1883. #5 named Reclus.

The water capacity, 825 gals. and the coal capacity, 3000 lbs. was so small that tenders were finally added to these engines, as in the case of the Rogers. The U. S. renumbered these engines but only four are recorded for the period, two on the P. R. R. carried Nos. 6 and 7, which might be their original numbers and Nos. 451 and 452 on the I. C. C.

4-4-0 Type

13x20" 54" No other data

Nueva Granada	Portland	# 37	10-26-1852
Bogota	Portland	# 38	11-13-1852
Panama	Portland	# 39	11-30-1852
Gorgona	Portland	# 65	4- 5-1854
Obispo	Portland	# 69	9- 2-1854
Matachin	Portland	# 70	8-31-1854
Gatun	Portland	# 78	8-30-1855
Manzanilla	Portland	# 79	8-30-1855
Cardenas	Portland	# 89	8- 1856
Barbacoas	Portland	# 90	8- 1856
Atlantic	Portland	# 125	4- 1865
Pacific	Portland	# 126	5- 1865
South America	Portland	# 150	11-30-1867
North America	Portland	# 151	2- 5-1868
New York	Portland	# 157	4- 5-1869
San Francisco	Portland	# 158	4-27-1869

As previously stated, the first ten locomotives were constructed for 5' 6" gauge, the remainder were built for 5' gauge. The majority of these engines were in service at the time the French took over the P. R. R.

16x22" 54" No other data

12	Seine	Rogers	#3166	1 -5-1883
13	Loire	Rogers	#3168	1- 6-1883
14	Rhone	Rogers	#3169	1- 8-1883
15	Isere	Rogers	#3336	8-29-1883
16	Charente	Rogers	#3337	8-29-1883
17	Tarn	Rogers	#3348	9-11-1883
18	Durance	Rogers	#3349	9-11-1883

None of these locomotives were taken over by the U. S. from the French and such data in the records is only fragmentary.

16x24" 53" 66000 lbs. ——— 130#

22	Baldwin	#4920	1-1880	27	Baldwin	#6493	12-1882
23	Baldwin	#4923	1-1880	29	Baldwin	#6890	8-1883
26	Baldwin	#6492	12-1882	30	Baldwin	#6923	9-1883

These engines marked a big advance over the light Portland's. They were originally equipped with diamond stacks but these were soon

replaced by the straight stack. Three were taken over by the U. S., Nos. 18, 21 and 22, but this was after the renumbering.

17x24" 62⅜" ——— ——— 130#

41-57 Cooke 1519-1535 1883

The records show that seven, Nos. 25, 27, 28, 30, 31, 36 and 57, came to the Panama Railroad after French control and three, Nos. 498-500 went to the I. C. C. Save for the No. 57, all were renumbered by the U. S.

2-6-4T Type

19x26" 54" 183500 lbs. 26590 lbs. T. F. 180#

101-124 Schenectady #38174-97 1905

In 1909, these 24 locomotives were rebuilt to the 2-6-0 type, one was converted to an oil burner and tried in passenger service.

2-6-0 Type

19x24" 54" 124500 lbs. 23980 lbs. T. F. 180#

201-230 Cooke 39092-121 1906 231-300 Cooke 39142-211 1906

Three of these locomotives were in service up to March, 1948.

19x24" 54" 122310 lbs. 23960 lbs. T. F. 180#

301-306	Baldwin	30051-6	1907	325-328	Baldwin	30217-20	1907
307-310	Baldwin	30121-4	1907	329-333	Baldwin	30259-63	1907
311-317	Baldwin	30141-7	1907	334-338	Baldwin	30273-7	1907
318-321	Baldwin	30188-90	1907	339-340	Baldwin	30313-4	1907
322-324	Baldwin	30213-5	1907				

20x26" 63" 146600 lbs. 28100 lbs. T. F. 200#

651-662 Brooks 45845-56 1908

The P. R. R. lists the cylinders as 19x26" and they may have bushed them to this figure. Four of these engines never were equipped with superheaters.

18x26" 63" 168000 lbs. 28400 lbs. T. F. 250#

701-705 Schenectady 69287-91 1940

20x24" 54" 159400 lbs. 30000 lbs. T. F. 220#

801-803	H. K. Porter	7622-5	1942	805	H. K. Porter	7627	1942
- 804	H. K. Porter	7628	1942	806	H. K. Porter	7626	1942

Diesel Electric

401-405 Gen'l Electric Co. 12582-6 1941 7x10" 40" 194460 57000# 0-4-4-0

The following locomotives were used by the canal companies, both French and American:

0-4-2T Type ——— 5' gauge

13x18" 40" 40000 lbs. 6450 lbs. T. F. 100#

401-407 H. K. Porter ——— 1883

0-6-0T Type ——— 5' Gauge

16½x23½" 47¼" 77000 lbs. 14450 lbs. T. F. 130#

501-543 Raismes, France ——— 1886-7. These were the "Chiriqui's" that did wonderful service during the digging of the canal.

15½x19½" 47¼" 56640 lbs. 122500 lbs. T. F. 125#

701-755 Raismes, Cockerill, France ——— 1882-1887. These were the "Belgians" not to be confused that they were built in that country.

2-6-0 Type ——— 5' Gauge

20x26" 63" 147500 lbs. 24690 lbs. T. F. 180#

601-620 Brooks 39122-41 1906

0-6-0T Type ——— 42" Gauge

15x20" 40" 66800 lbs. 15700 lbs. T. F. 170#

871-880 H. K. Porter ——— 1909

0-6-0T Type ——— 36" Gauge

8x14" 24" 23000 lbs. 4400 lbs. T. F. 160#

821-830 H. K. Porter ——— 1910

8x14" 24" 28000 lbs. 4830 lbs. T. F. 160#

831-834 H. K. Porter ——— 1910

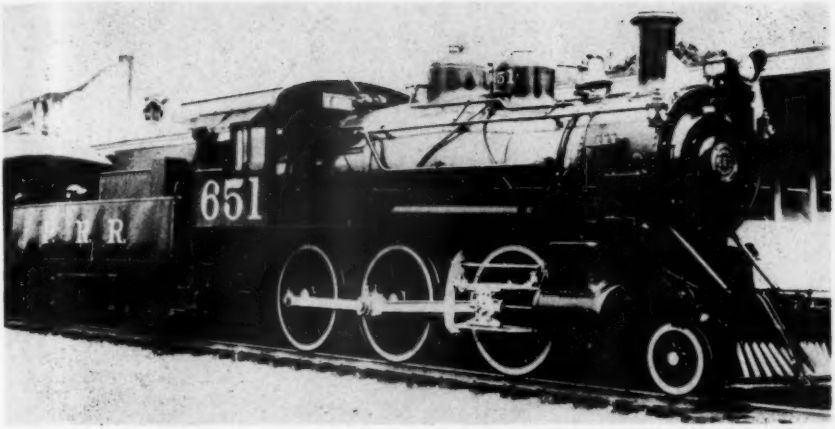
0-4-0T Type ——— 36" Gauge

10x16" 29" 36000 lbs. 5620 lbs. T. F. 130#

801-804 Davenport ——— 1908

10x16" 31" 36000 lbs. 6480 lbs. T. F. 150#

851-855 Vulcan ——— 1908



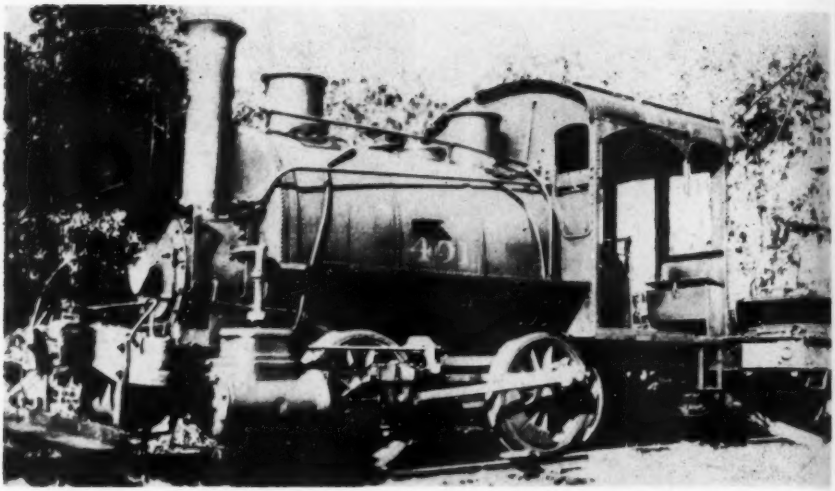
P. R. R. #651 on President F. D. Roosevelt's special train at Balboa Heights.

P. R. R. #703 on Train #4 passing in front of Cristobal Yard Office Aug. 1947.

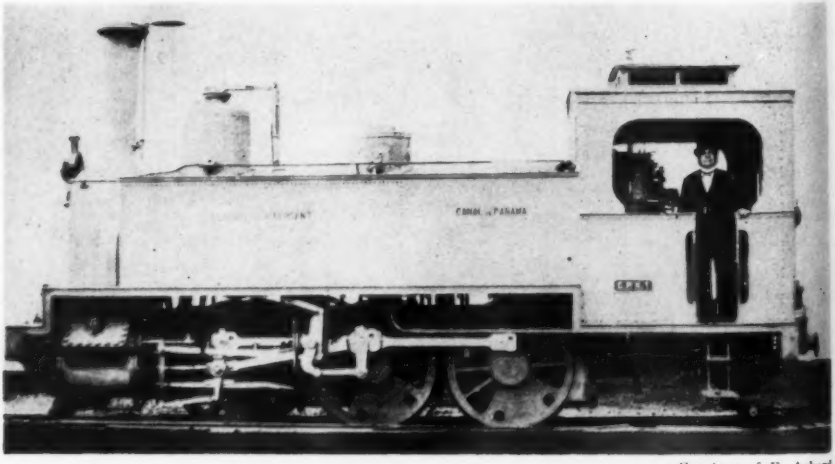
P. R. R. #704, Schenectady #69290, 1940, 18x26" 63" 168000, at Mt. Hope.

P. R. R. #805, H. K. Porter #7627, 1942, 20x24" 54" 159400, at Cristobal.

I. C. C. #543, known as the "Chiriqui Class," built in France, 1866-7.

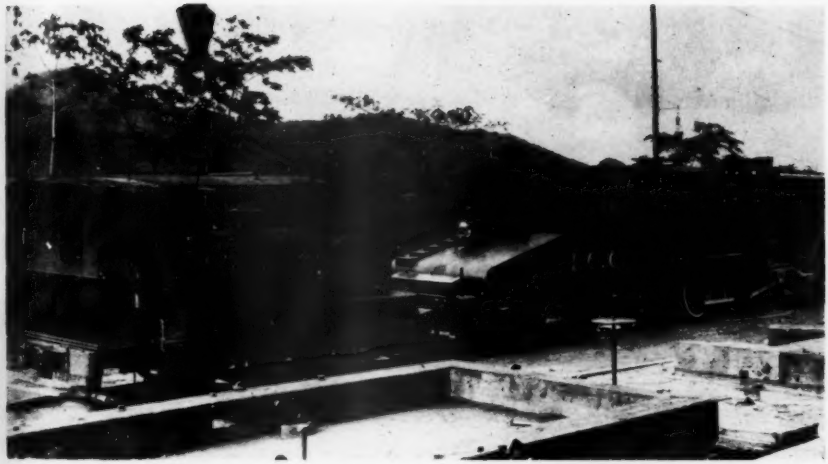


P. R. R. #401, H. K. Porter, 1883, 13x18" 40" 40000.



Courtesy of F. Achard

The C. P. N. 1 mentioned in the letter from Mr. Achard.



I. C. C. #704, known as a "Belgian," built 1882. I. C. C. #311, Baldwin, 1907.

Motor Car #1 taking oil (or gas) at Balboa. No data.

0-4-0T Type ——— ½ meter (19⅝")

5 11/16x8" 16" 10000 lbs. 1786 lbs. T. F. 100#

01-010 Bourden, Decauville, France ——— 1884

One or more of Nos. 401-407 were rebuilt to 0-4-0T type by the I. C. C.

The following Rail Motor Cars have been owned by the P. R. R.:

No.	Engine	Pass Cap	Lgth.	Wt.	H.P.		
3	Buda GF 638 Gasolene	30	32 ft.	22000#	125	Edwards Motor Car Co.	1928
4	Buda GF 638 Gasolene	30	32 ft.	22000#	125	Edwards Motor Car Co.	1928
5	Buda GF 638 Gasolene	46	46' 4"	50000#	125	Edwards Motor Car Co.	1936
6	(2) Buda GF 638 Gasolene	46	50 ft.	55000#	125	Edwards Motor Car Co.	1939
6A	Passenger Trailer	56	46' 10"	45000#	—	Edwards Motor Car Co.	1939

Subsequent to the publication of the history of this railroad in our Bulletin No. 78, one of our members, Mr. F. Achard of Paris, France, was kind enough to write your editor as follows:

"The very interesting paper depicts, opposite page 33, a train headed by No. U. S. A. 510, former French Locomotive. For the story to come of the motive power, I may perhaps offer a little contribution.

"The enclosed photograph, C. P. N. 1, represents a locomotive identical with No. 510. It is the reproduction of a plate in an Album issued in the late nineties by the builder, Societe Anonyme Franco-Belge, (Works at la Croyere in Belgium and Raismes, France). The said society has compiled a list of its locomotives about 45 years ago. Unfortunately, this list is not quite reliable and can be accepted only under serious reservations, as it conflicts, more than once with evidences from the maker's plates affixed to the engines.

"As you may remark, this engine No. 1, bears both the name 'Canal de Panama' and 'Couvreux & Hersent,' the latter being the contractors for the Canal Company. It is difficult, therefore, to say whether the ownership rested with the Canal Company or the contractors.

"In the above mentioned list, all the engines of the same type (Type 27 in the books of Franco-Belge) are attributed to Canal de Panama, none to Couvreux. According to the list, 88 engines of class 27 were delivered:

Maker's Nos.	When Delivered		Built in	
373-382	March	1881	C	(373-6; 381-2, 6 engines)
407-412	March	1882	C	(407-8, 2 engines—these eight engines
447-456	Oct.	1882	C	identified elsewhere)
466-475	May	1883	C	
528-537	April	1885	R	
538-557	April	1885	C	
616-637	Dec.	1886	C	

C—built in la Croyere; R—built in Raismes.

From the 88 locomotives listed above, 80 at the most have gone to Panama. The class is named 'Machines de terrassement'—earthworks.

"In order to complete my information, I may add that the Franco-Belge has built engines of several other classes for either Couvreux or Canal de Panama. These are

Type 26—small 0-4-0 tank engine with vertical boiler.

479-480	Aug.	1883	C	Couvreux

Type 30—Rocking lever, probably Brown system, wt. 3.5 tons, 0.50m gauge.

477-478	May	1883	R	Couvreux de fils
481-482	Sept.	1883	R	Couvreux de fils

Type 31—Rocking lever, 0-8-0 tank engine, wt. 7 tons, 600mm gauge.

483-484	Sept.	1883	R	Couvreux
510-519	July	1884	C	Canal de Panama
664-665	June	1887	R	Canal de Panama

Type 32—Rocking lever—no further details.

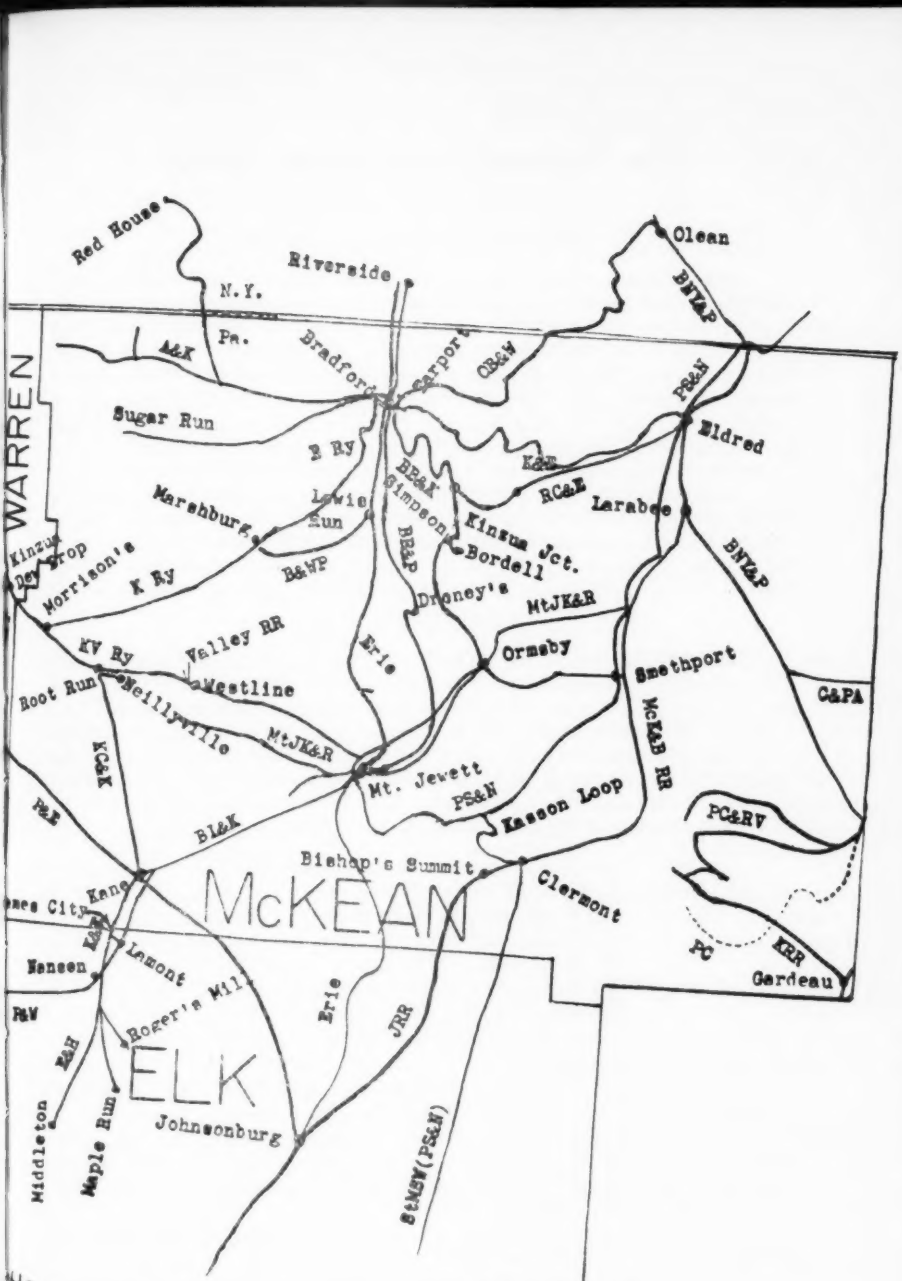
485-486	Sept.	1883	R	Couvreux

Type 88—machine de terrassement.

565-589	May	1886	C	Canal de Panama
637-661	March	1887	R	Canal de Panama

This is the end of my knowledge."

In closing this record, it is to be regretted that it is not more complete. The reader must recall the destruction of the records in the two disastrous fires at Colon; the change of control from the railroad to the French interests and then to our own Government, none of which have been to the advantage of the research worker. Altho' the present authorities have helped, the chief basis of this list are the records of the various locomotive builders and the assistance of some of the "old timers" in the Canal Zone, to whom the author wishes to express his appreciation.



The Railroads of McKean County, Pennsylvania

The Railroads of McKean County

By C. F. H. Allen

THE PENNSYLVANIA GROUP

This consists of the standard gauge McKean and Buffalo, and Johnsonburg Railroad Companies, and the group of narrow gauge railroads that was constructed in the interests of the Buffalo, New York and Philadelphia Ry., and its successor, the Western New York and Pennsylvania. The latter was sometimes known as the Pennsylvania narrow gauge system. The component companies were Olean, Bradford and Warren; Kendall and Eldred; Bradford; Kinzua. With the end of the "gusher" oil period, there was no longer any reason for the existence of the first two, and they were abandoned. The others, however, in whole or in part were utilized for many years for transporting forest products. Where business warranted, they were widened to standard gauge, and operated in connection with the Kinzua Valley Railway. The Valley Railroad (of Pa.) is an independent road, dependent on the Kinzua Valley to the west for disposing of its originating lumber traffic.

McKean and Buffalo

The McKean and Buffalo RR Co. was incorporated on Sept. 11, 1874 with an authorized capital stock of $400,000 (of which $388,200 was paid in) to build a standard gauge road from Larabee on the Buffalo, New York and Philadelphia Ry. southerly to a point in Sargeant's Township near Bishop's Summit (Clermont) (22.31 mi.), for a greater part of the distance along the valley of Potato Creek. It was opened in 1875, when it reported 2 locomotives and 1 car.

The officers and directors, elected in 1875, were as follows:

Pres.	Byron D. Hamlin, of Smethport (p. 77)
Sect.	J. F. McPherson, of Warren
Treas.	W. F. Wilson, of Buffalo
	J. W. Fall, of Northeast, Pa.
	W. H. Glenny, of Buffalo
	D. R. Hamlin, of Smethport
	George J. Magee, of Watkins, N. Y.
	J. Condit Smith, of Buffalo

The office was at Smethport.

W. H. Glenny was also a director of the Buffalo, New York and Philadelphia, and of the Olean, Bradford and Warren.

George J. Magee was prominent in nearby New York railroads, being president of the Corning, Cowanesque and Antrim, and of the Syracuse, Geneva and Corning and of the Fall Brook Ry.; he was also a director of the BNY&P.

J. C. Smith was a director of the BNY&P and of the Dunkirk, Allegheny Valley and Pittsburgh.

The stations, as of 1878, were Larabee; 2, Frisbee; 5, Farmers Valley; 9, Smethport; 14, Crosby; 15, Colegrove; 16, Hamlin; 20, Wernway; 22, Clermont.

At the end of the first year's operations a net of $610.41 was reported. The road appeared to be profitable, because in the year ending Dec. 31, 1881, it is recorded that trains were run 54,000 miles (this, with 2 locomotives and 7 cars owned), carrying 36,039 passengers, who paid $12,282.42 for the ride, and moving 140,155 tons of freight, from which $58,105.90 was realized. The total income was $73,876.73, which, with operating expenses of $43,100.36, left the neat sum of $30,776.37 as net earnings. Consequently it is understandable why the road was purchased by the Buffalo, New York and Philadelphia "after the close of the fiscal year," Dec. 8, 1881. At this time Archer N. Martin (p. 74) was president and F. S. Buell[1] treasurer, and the office had been moved to Buffalo.

The McKean and Buffalo was always listed separately in subsequent Poor's Manuals, like the Bradford, Kinzua, etc. The corporate property, rights and franchises of this company were acquired by the Western New York and Pennsylvania Railway Co. in an agreement dated May 1, 1911, and the two were merged on July 1st. Thus its corporate existence was demised.

Johnsonburg

In order to afford a route with lower grades for the Philadelphia and Erie between Port Allegheny and Emporium, and also tap the Elk County coal fields by extending the McKean and Buffalo southwards from Clermont, the Johnsonburg RR Co.[2] was incorporated on Mar. 14, 1887, with a capital stock of $200,000. It was a standard gauge road 19.69 mi. in length, lying mostly in Elk County. Construction was finished and the road opened by Apr. 24, 1888. The president was J. Bayard Henry, and sect.-treas., Joseph S. Vanderzandt, both of Philadelphia. On July 8, 1889 it was leased to the Pennsylvania RR for 50 yrs.

The stations (of date Nov. 1, 1923) were Johnsonburg, Glen Hazel, Straight, Instanter, Smith's Run, Quinnwood, Woodvale, and Clermont. It appears that some were abandoned,[3] for on early maps there occur such names as Ketner.

With the exception of 1.22 mi. in Johnsonburg, which was sold to the Penna. RR, the remainder (18.40 mi.) was abandoned in 1927, operations being discontinued on Oct. 31st. The charter powers were surrendered, the company dissolved, and the property sold. The Manor Real Estate and Trust Co. bought 6.53 mi.

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[1]Buell was treasurer or secretary-treasurer of the Buffalo, New York and Philadelphia; Western New York and Pennsylvania; Olean, Bradford and Warren; Kendall and Eldred; Bradford and Kinzua; and Kinzua Valley.

[2]This should not be confused with a railroad company of the same name, incorporated on Nov. 15, 1887, which name on Nov. 19, 1888, was changed to the Johnsonburg and Bradford RR Co.

[3]It will be recalled that in 1884 the (second) Lackawanna and Pittsburgh had trackage rights over the Buffalo, New York and Philadelphia to Bishop's Summit, Pa. This station was on the Johnsonburg RR. a few miles south of Clermont. Bishop's Summit is a height of land west of Clermont. The station is shown on the map of McKean City.

Olean, Bradford and Warren

The Olean, Bradford and Warren was projected as a 3-ft. gauge line extending from Olean, N. Y., to Warren, Pa., via Bradford, a distance of 50 miles. However, actual construction was confined to the 23 miles between Olean and Bradford. Since it crossed the state line, the two parts were chartered separately; the section in N. Y. (12.53 miles) was known as the Olean, Bradford and Warren Railroad (p. 73) while the Pennsylvania portion was the Olean, Bradford and Warren Railway (p. 77). The chief engineer was Robert Ewing; he laid out the OB&W (both parts), the Kendall and Eldred, and the Bradford, Bordell and Kinzua. Surveying started on Oct. 2, 1877, H. R. Smith arriving from Pittsburg, and beginning work within the hour. P. H. Towell took the contract for grading to the state line on the 10th and began work on the 17th. The road was finished in 94 days. The entire line was built by Marcus Huling (according to Mr. Moore) for whom the construction locomotive was named. It was stated to have an excellent roadbed; the trains ran at the rate of 20 miles per hour, and there were no derailments.

The stops were Bradford, Kendall, Tarport, Babcock Mills, Derrick City, Gilmore, Red Rock, Bell's Camp, State Line, Knapps Creek, Rock City, Four Mile, Two Mile, Austin and Olean. The closely related Kendall and Eldred branched off to the east at Tarport.[4] The name is said to have originated in a suit of tar and feathers presented to a frisky citizen.

To reach Olean it was necessary to cross the Big Level which had its northern end near Rock City; this accounts for the tortuous route followed up the hills and the many trestles. In some places the grade was 200 ft. to the mile. The state inspectors reported: "If any tangents occur, they are barely long enough to allow a train to straighten out." Some of the trestles were very high and long and had picturesque names, such as Bell's Camp and Two Mile. One of these, several hundred feet in length, extended through the village of Red Rock; a long bridge spanned the Allegheny River at Olean. Two Mile and Four Mile refer to wide valleys. There was at one time a booming oil town called Four Mile, that had a "fine hotel" and numerous stores. Rock City marked the northernmost end of the Bradford oil field. During the oil boom it, too, was a thriving town, which all but vanished with the disappearance of the gushers. Now (1946) with modern methods, oil is still obtained by pumping.

The trainmen whose names are recollected by Mr. Moore are as follows:

Conductors:	Iz. Barbour, Emery Drake, Geo. Fagnan, E. Jones, Charley Keysaw, ———— Miller, Jerry Moynahan, A. W. Nelson, O. H. Scudder, Billy Sibley.
Engineers:	Jud Primer, Tom Riley.
Fireman:	Bill Furlong.

[4]This settlement, known as "wicked Tarport" in the gusher era, is now East Bradford.

The rolling stock comprised 3 locomotives (4-4-0 and 2-6-0) and 85-115 cars, depending on the year reported. The cars were built by the York Car Co., and some had air brakes. The revenue was derived from a large passenger traffic, from freight, largely oil well supplies and lumber, and from interchange with the Kendall and Eldred.

The details of incorporation, operation and officials are given under the separate companies. It will be seen that they were very profitable, so it is not surprising to find that they were sold on Dec. 8, 1881 to the Buffalo, New York and Philadelphia Ry. Co.; the sales price was $600,000, just double the combined capital stocks of both organizations.

Commenting on the narrow gauge roads, the "Warren Mail" for Mar. 7, 1882 noted that the OB&W was to be repaired in a more permanent way than originally planned. The original capital stock ($300,000) of the OB&W and Kendall and Eldred was earned, in addition to running expenses, in 2.5 yrs.; the K&E was the more profitable, clear itself, plus $40,000 in 1.5 yrs. Both roads were sold for double their cost. The OB&W receipts were now off $10,000 per month, the K&E being more profitable.

At this time the BNY&P also secured other nearby roads in a similar manner; these were the Kendall and Eldred (p. 77), Bradford and Kinzua (p. 80), McKean and Buffalo (p. 68), Genesee Valley Canal RR., and the Rochester, New York and Pennsylvania, as well as the Buffalo Coal Co.

It will be recalled that the Buffalo, New York and Philadelphia Railway Co. was reorganized in 1883 as The Buffalo, New York and Philadelphia Railroad Co.,[5] and again in the winter of 1887-1888 to the Western New York and Pennsylvania Railroad Co. The latter was sold under foreclosure on Feb. 5, 1895, and reorganized as the Western New York and Pennsylvania Railway Co. This new company was leased on Aug. 1, 1900 to the Pennsylvania Railroad Co.

At the time of purchase the Genesee Valley Canal Railroad had not been completed, but construction was finished by the close of 1882. The Genesee Valley Canal Railroad Co. and the Genesee Valley Terminal Railroad Co. (incorp. Aug. 14, 1882) were consolidated and merged to form the Pennsylvania and Rochester Railroad Co. on Nov. 15, 1912. The original lease of the GVCRR to the BNY&P was dated Nov. 1, 1881, and was for a period of 900 years. This lease was assumed by the successors and continued in effect until Feb. 28, 1916, when the corporate property, rights and franchises of this company were acquired by the Western New York and Pennsylvania Railway Co. This line, between Rochester and Hinsdale, is still in operation, but for freight only.

The Rochester, New York and Pennsylvania Railroad Co. is described in Bulletin No. 64, p. 32. Since then the following additional information has been received from Mr. J. Taney Willcox, secretary of the Pennsylvania Railroad Co. The RNY&P was leased to the BNY&P Ry. Co. under date of Dec. 8, 1881, for a term of 999 years. While the RNY&P had a chartered right to construct a railroad from Rochester

[5]According to the "Warren Mail" for Jan. 24, 1884, "the new management will work in closer cooperation with the PRR."

to the Pa. state line, the construction of the Genesee Valley Canal RR., which was practically a parallel line, and the leasing of both properties to the BNY&P Ry. Co. made unnecessary the completion of The Rochester, New York and Pennsylvania Railroad Co. other than the 11.92 miles between Nunda Junction and Swains.

The predecessor, The Rochester, Nunda and Pennsylvania Railroad Co. (1873) had built 18.52 miles in 1874, between Mt. Morris and Ross Jct. (Ross' Crossing) and abandoned the 11.58 miles from Mt. Morris to Nunda Jct. in 1880. The RNY&P RR. Co. (July, 1881) rebuilt the 6.94 miles between Nunda Jct. and Ross Jct. to standard gauge in 1882, and extended the line 5 miles to Swains. The 9.58 miles between Nunda and Swains was abandoned in 1908, and the total in operation today is the 2.36 miles between Nunda and Nunda Jct.

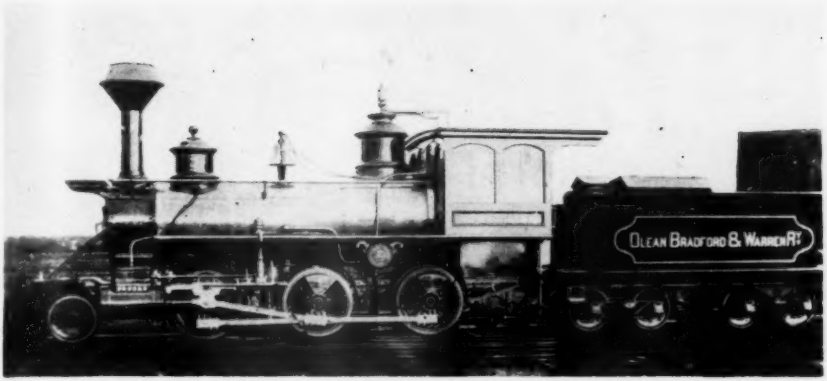
The OB&W had considerable competition, in spite of which it had an excellent financial record, as is described below. The OB&W and the Bradford and Foster Brook endeavored to utilize the same land for their respective rights of way. On Apr. 8, 1878 the "Warren Mail" noted that the OB&W had thrown a spur across the B&FB right of way, and on the 16th that the fight had been taken to the courts. The OB&W claimed that the B&FB was not a railroad in the accepted sense of the word and asked to have its charter withdrawn. Apparently the petition was unsuccessful for the B&FB was built from Bradford up the Foster Brook Valley to Gilmore, a distance of 4 miles, paralleling the OB&W nearly to Derrick City. The charter was granted to it on Oct. 4, 1877, and the road was opened to Tarport by Jan., 1878. It made stops at Tarport, Foster Brook, Babcock Mills and Harrisburg Run. It cut the 40c fare to 25c. The B&FB ("Bradford Elevated," "Peg Leg") was a monorail that was visualized as a competing means of transportation, since it would be much less expensive to construct that even a narrow gauge line. It would require no extensive grading or ballast. No true comparison was ever made, because after a relatively short period of service the engine blew up on Jan. 28, 1879 (cause—low water), resulting in six fatalities.

There was also a Bradford and Kendall (horse car) Railroad in the early 1880's, which, with a motive power of 9 horses, covered the 1.52 miles between these two towns. In 1882 they carried 320,168 passengers and earned $16,247; the profits were $4,718, from which were paid dividends of $4,598 (38%).

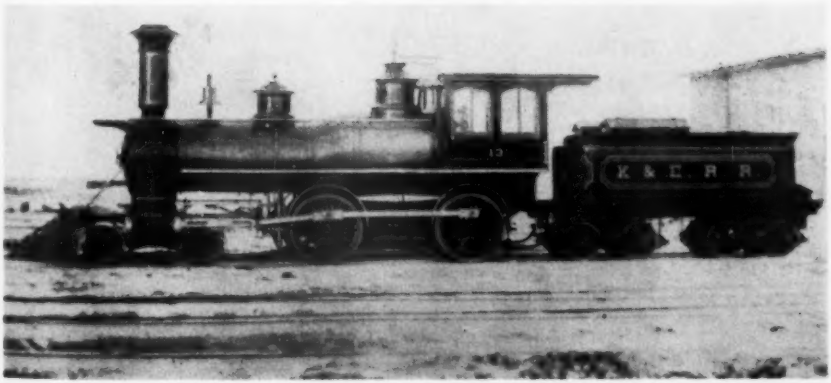
One may conclude that in these early days there was profit for all, by any mode of transportation. Probably even then it was recognized that the conditions were only of a transitory nature, for little provision was made for the future.

The Olean, Bradford and Warren became less profitable with the succeeding years, and it was finally closed, the last train being run on Aug. 6, 1896. However, the right of way and the track were maintained and the franchise was held by running a train, consisting of an engine and one coach, over the line once a year.

During the year ending June 30, 1898, the section of the road from Bradford Jct. to the state line, and all of the New York portion except

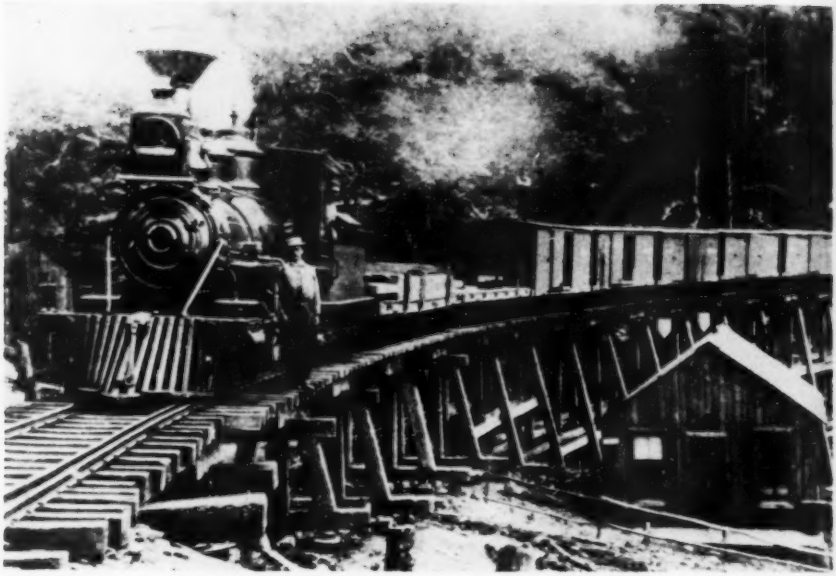


Olean Bradford and Warren 3 "State Line". Brooks #321, 1878, 12x16" 35".

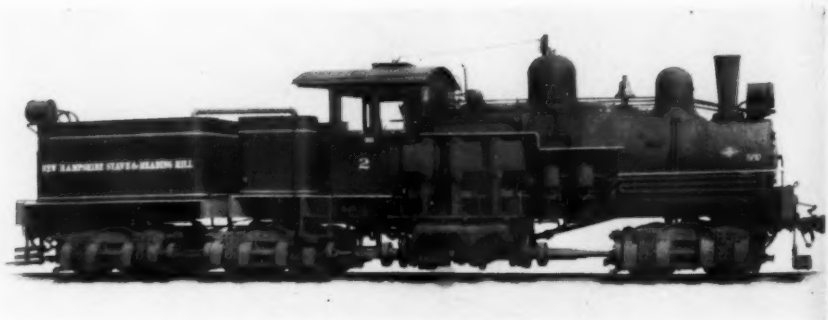


Courtesy of D. H. Kirkwood

Kendall and Eldred #13, Brooks 486, 1880, 12x18" 42".



A freight train on the Kendall & Eldred R. R.



Valley R. R. #2, Lima #3173, 1922 12x15" 36" 161900

1.11 mi. from Olean to Pierce's Tannery[6] were acquired through condemnation proceedings by the Olean, Rock City and Bradford Electric Railroad Co., the transaction being permitted by the courts.

The Olean, Rock City and Bradford Railroad Co. was chartered as two companies having the same name, one in N. Y. and the other in Pa., on Feb. 26, 1897; on June 22nd they were consolidated.[7] It was one of the early interurban roads.[8] The principal attractions were the resorts in the vicinity of Rock City,[9] including the Hotel Bon Air. When this was burned and not rebuilt the fortunes of the electric road declined. It was placed in the hands of a receiver on Feb. 21, 1906, sold on the 7th of June and transferred to the Rock City RR. Co. on the 1st of July. In 1907 it had apparently changed hands again and was known as the Western New York and Pennsylvania Traction Co. The date of its demise is unknown. At present the old roadbed is probably used, in part at least, by state highways No. 16A in New York, and 348 and 646 in Pa.

Olean, Bradford and Warren Railroad Co.

This company was incorporated in New York on Oct. 17, 1877, with a capital stock of $60,000 to build a 3-ft. gauge road from Olean to the state line, a distance of 12.53 miles, and to connect with the continuation road in Pa. The stock was greatly over-subscribed and the capitalization was subsequently raised to $100,000 and later to $150,000. The cost of construction and equipment was recorded as $147,982.34.

The officers and directors were as follows:

Pres.	Charles S. Cary, of Olean
Treas.	H. S. Morris, of Olean (1878)
	Franklin S. Buell, of Buffalo (1879 and later) (p. 69)
Directors	C. V. B. Barse, of Olean
	R. W. Evans, of Olean
	George B. Gates, of Buffalo
	William H. Glenny, of Buffalo (p. 68)
	C. J. Hamlin, of Buffalo
	William Hamlin, of Buffalo
	Henry C. Jewett, of Buffalo
	Sherman S. Jewett, of Buffalo
	Bronson C. Rumsey, of Buffalo
	Jacob F. Schoelkopf, of Buffalo
	C. S. Whitney, of Olean

The office was at Olean.

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[6]This small segment was acquired by the WNY&P on Apr. 11, 1916, thus ending the corporate existence of the OB&W.

[7]The officers and directors, with one exception, were in Massachusetts.

[8]It utilized most of the former roadbed of the OB&W, but in a few places constructed an entirely new line; it also traversed the site of the Pegleg Railroad along Foster Brook, near Bradford. When the state inspectors examined it very thoroughly in 1900, they reported that it was in terrible condition and should be closed. Sufficient annual repairs were made so that operations could be continued, but succeeding reports of the inspectors were invariably unfavorable.

[9]Rock City, at an elevation of 1800 ft., attracted sufferers from hayfever. It was 6 miles from Olean; 15 miles from Bradford, 76 miles from Buffalo, and 112 miles from Rochester.

Cary was secretary of the Bradford, and the Kinzua Rys.; sect.-treasurer of the Kendall and Eldred; vice-president of the Coudersport and Port Allegany; general manager of the OB&WRy.; and a director of the Allegheny and Kinzua Ry. Gates was also president of the Kendall and Eldred up to 1882. H. C. Jewett was a director on the Bradford, and the Kinzua Rys., and president of the Kendall and Eldred after 1882. S. S. Jewett was not only a director of these two, but also of the Buffalo and Jamestown and of the Kendall and Eldred. Rumsey was president of the Buffalo, New York and Philadelphia before the reorganization in 1882. Schoelkopf was a director of the BNY&P.

Charles S. Whitney was later president of the Bradford and Western Pennsylvania Railroad Co. He was born on Feb. 12, 1824, in Belmont, N. Y., the son of a Charles S. Whitney; the paternal ancestors came from Vermont, while his mother was an Ohio girl and scholar under his father. Charles, senior, died in 1837 and the four children were left to "shuffle for themselves." Charles, junior, engaged in various pursuits, working on a farm, as a warehouse boy, clerking in grocery, post office, etc., until 1848 when he started in the mercantile business for himself. In 1850 he joined the California gold rush, but after a year returned to Belmont, and married Clara A. Parker, the daughter of the leading merchant, A. E. Parker. He entered into this business, finally purchasing his father-in-law's interest and continued the business alone for several years. He was postmaster for 6 years under Lincoln's administration, and served as a supervisor of Amity, N. Y., for 3 years. He gave up the store and post office in 1866 and went into oil business, from which it appears the transition to railroad management was an easy step.

The engineer was George S. Gatchell of Buffalo, who was also the general superintendent of the BNY&P, and of the McKean and Buffalo. The first superintendent was William L. Baker of Olean; he was shortly succeeded by J. W. Watson, who held the same position on the Kendall & Eldred, and subsequently on the BNY&P.

After the first six months of operation the road paid 8% dividends, and reported a balance on hand of $12,324.99. The report for the first complete year of operation shows that 21,597 passenger and 7,140 freight trains were run. These carried 145,688 passengers, who paid at the rate of 5c per mile, and moved 18,672 tons of freight. Earnings from the passengers were $41,689.83 and from the freight $30,717.28. The net was $36,978.95 which, with dividends paid of $31,000, left a balance of $5,978.95. In 1882 it paid dividends of $37,500 (25%) and reported a surplus of $9,435.61.

After the lease to the Buffalo, New York and Philadelphia (at a rental of $50 per year), there was a new set of directors:

Clarence H. Clark, of Philadelphia
John W. Jones, of Buffalo
Archer N. Martin, of New York

Western New York & Pennsylvania R. R.

July, 1893

Rochester Division. Narrow Gauge System

OLEAN, ELDRED, BRADFORD, KINZUA AND OIL CITY

Eastward Mail 233	Exp 231		Eastern Time		Dist	Westward Exp 233	Mail 234			
P.M.	A.M.					A.M.	P.M.			
5 55	10 25	AR	Olean		0	6 25	1 00			
5 37	10 05		Austin #		4	6 40	1 20			
5 32	10 00		Johnson's #		6	6 45	1 25			
5 18	9 43		Four Miles #		9	7 01	1 41			
5 15	9 40		Rock City		10	7 04	1 44			
5 09	9 33		Knapp's Creek		11	7 13	1 54			
5 02	9 26		State Line		12½	7 21	2 03			
4 53	9 17		Bell's Camp		15	7 32	2 15			
4 41	9 05		Red Rock		17	7 45	2 28			
4 37	9 01		Gillmor		18	7 49	2 32			
4 33	8 57		Derrick		19	7 53	2 36			
4 29	8 53		Babcock's Mill #		20	7 57	2 40			
4 25	8 49		Foster Brook #		21	8 01	2 44			
4 20	8 45		Tarport		22	8 05	2 50			
4 15	8 40	LV	Bradford		23	8 10	2 55			
245	243					244	246			
P.M.	A.M.					A.M.	P.M.			
6 25	9 25	AR	Eldred		0	10 10	6 50			
6 16	9 18		Windfall #		2	10 17	6 59			
6 07	9 08		Prentice Vale #		4	10 24	7 07			
6 00	8 58		Duke Centre		6	10 33	7 14			
5 55	8 53		Rixford		7	10 38	7 19			
5 40	8 37		Summit City		11	10 58	7 34			
5 25	8 25		Dallas #		14	11 04	7 48			
5 15	8 15		Sawyer #		16	11 14	7 58			
5 10	8 10		Lafferty #		17	11 19	8 03			
5 05	8 05		Tarport		18	11 25	8 09			
P.M. P.M.	5 00	7 55	LV	Bradford	AR	19½	11 30	8 15	P.M.	A.M.
8s00 8 20	3 30	12d40	AR	Bradford	LV	0	12 40	8 15	3d55	8s40
7 38 7 58	3 07	12 20		Custer City #		5	1 03	8 32	4 15	8 57
7 31 7 51	2 57	12 13		Song Bird		7	1 13	8 39	4 22	9 04
7 23 7 43	2 50	12 06		Elmwood #		8	1 20	8 45	4 30	9 10
7 10 7 30	2 30	11 53		Marshburg		12	1 40	9 02	4 48	9 27
6 47 7 07	P.M.	11 28		White Gravel		17	P.M.	9 22	5 08	9 47
6 37 6 57		11 18		Watsonville		20		9 33	5 18	9 58
6 30 6 50		11 11		Neilly's		22		9 41	5 25	10 06
6 25 6 45		11 06		Morrisons		24		9 48	5 33	10 13
6 15 6 35		10 56		Dew Drop #		26		9 56	5 40	10 21
6 05 6 25		10 47		Kinzua	AR	28		10 05	5 50	10 30
P.M. P.M.		A.M.						A.M.	P.M.	A.M.
6 25		10 43	AR	Kinzua	LV	28		10 13	5 55	
5 49		10 12	LV	Warren		41		10 44	6 26	
5 33		9 55		Irvineton		47		11 03	6 45	
4 47		9 13		Tidioute		62		11 35	7 19	
4 15		8 41		Tionesta		77		12 07	7 53	
3 30		8 00		Oil City		97		12 55	8 45	
8 40		9 10	LV	Pittsburg	AR	230		6 35	7 30	
A.M.		P.M.						P.M.	A.M.	

Stops on Signal. s Sunday only. d Daily. All other run daily except Sunday.

Bronson C. Rumsey, of Buffalo
George W. Seligman, of New York
Isaac N. Seligman, of New York
H. Blake Taylor, of Philadelphia

In 1885, Calvin H. Allen was listed as first vice-president; in 1891 he was the president not only of the OB&W but of several other of the subsidiary roads leased to the Penna. RR. He was also a director of the BP&W RR.

Several of these directors were connected with the Buffalo, Pittsburgh and Western RR. Clark was a director of this road. Jones was president of the BP&W, first vice-president of the Buffalo, New York and Philadelphia before the reorganization, and president afterwards. Martin was president of the McKean and Buffalo; Genesee Valley Canal; Rochester, New York and Pennsylvania railroads; the (second) Allegany Central; and of the (second) Lackawanna and Pittsburgh (Bulletin No. 61, p. 77); second vice-president of the BNY&P, and, in 1882, vice-president and director of the BP&W. I. N. Seligman was a director of the last road while Tyler was president of the Maysville Extension (leased to the BP&W).

In 1888 the offices were in New York City. That year the state inspectors reported: "The line of this road is nearly a continuous curve, and it has a maximum grade of about 200 feet per mile. There are twenty pile and trestle bridges, also two spans of through Post truss over the Allegheny River. The trestles are nearly all on sharp curves and on the maximum grade. They aggregate about 230 bays of 14 ft. each. The bents are of hemlock and stringers of pine timber, the latter having been lately renewed, or rather taken the place of hemlock stringers. These trestles are nearly all in good life of timber, and those in part defective were being renewed. The superstructure is but crudely kept up. Very little attention is given to track adjustment and the road bed is unballasted. The sleepers are in just fair life. As a whole, it is in safe condition for the low rate of speed with which the trains move. A third rail, for about two miles out of Olean, accommodates a large tannery, lately erected. Very little way business is done." (It seems probable that the use of hemlock lumber, notoriously of short life, was due to its cheapness and accessibility; after the bark was stripped for the tanneries the wood left was almost waste).

In 1890 the inspectors noted that the road had very little traffic, and in 1894 that "it is very difficult to see the reason for keeping the road open."

The rest of its history has already been told.

Olean, Bradford and Warren Railway Co.

The Olean, Bradford and Warren Railway Co. was chartered[10] in Pennsylvania on Oct. 17, 1877, with a capital stock of $150,000, to build the 10.4 miles from Bradford to the state line where the New York

[10]The Articles of Association of Sept. 28, 1877 authorized construction from the state line to Warren.

portion terminated. The cost of the road was $141,452.40. The office was in Bradford. The officers were:

Pres.	Byron D. Hamlin, of Smethport
Treas.	F. S. Buell, of Buffalo (p. 69)
Supt.	J. W. Watson, of Olean (p. 74)
Gen. Mgr.	C. S. Cary, of Olean (p. 73)

Mr. Hamlin was a lawyer and state senator. He was a director of the Kinzua, and the Bradford Railways, and of the Coudersport and Port Allegany Railroad, and president of the McKean and Buffalo (p. 68).

The returns from the complete year, 1882, showed that dividends of 12% ($18,000) were paid, and the total surplus at that time was $60,135.91.

The rest of the history is brief. With the above-mentioned transfer of the Olean, Bradford and Warren to the Olean, Rock City and Bradford electric line in 1897, only the 2.29-mile portion between Bradford and Tarport was left. Two locals were operated, daily except Sunday, between these points in 1902. In 1911 this short line residue was consolidated with the 0.05-mile segment of the Bradford Ry. into the Bradford Railroad. The latter was acquired and merged with the WNY&P on Jan. 29, 1932. To reach this segment, which was isolated from the rest of the PRR system under the abandonment of the OB&W in 1896, trackage rights from Riverside Jct., N. Y. were secured from the Buffalo, Rochester and Pittsburgh Ry. Co. These rights are still exercised.

Kendall and Eldred

The Kendall and Eldred Railroad Co. was chartered in Pennsylvania in 1877 with a capital stock of $150,000, to build a 3-foot line between Eldred and Kendall (or Tarport, a suburb of Bradford), a distance of 18.28 miles. This line was to be operated in connection with the Olean, Bradford and Warren. The "Warren Mail" for April 16th stated that the road was expected to be ready in 90 days.

The officers and directors were:

Pres.	George B. Gates, of Buffalo (p. 73)
Sect.-Treas.	Charles S. Cary, of Olean (p. 73)
Directors	Sherman S. Jewett, of Buffalo (p. 73)
	Charles W. Mackay, of Franklin
	Edwin J. Ralph, of Emporium
	William G. Roberts, of Allegheny Bridge (p. 80)
	W. J. Welsh, of Franklin

F. S. Buell was secretary-treasurer in 1880 (p. 69).

The superintendent was J. W. Watson (p. 74), of Olean. The office was in Buffalo.

The road was opened on July 30, 1877. The stations were: Tarport, Lafferty, Sawyer, Dallas, Summit City, Rixford, Duke Center, Prentisvale and Eldred. Conductors were Iz. Barbour, Jerry Moynahan, E. Jones (all also on the OB&W) and ———— Backer.

Mr. Moore writes: "The Kendall and Eldred Railroad construction was paid for at the time of completion. Conductor Jones had charge of the freight and tickets, and paid for the construction work as he went along. He built the stations and installed agents. As soon as two stations were connected, business was begun, and enough cash was taken in to push the work along as well as to pay dividends to the stockholders. In the few years of its existence it earned dividends of more than $300,000.

"Business was accepted only up to the limit of their facilities. The passenger trains carried as many people as could find seating or standing room in the coaches and on the platforms. It was no infrequent sight to see passengers seated on the fender of the engine. Conductors, firemen, and trainmen were not paid extravagant wages but the gifts from patrons of the road amounted to snug sums during the course of a month."

In 1880 the Kendall and Eldred had 4 locomotives and 65 cars. It carried 201,740 passengers and 40,362 tons of freight. The earnings from the first amounted to $78,091.55 while the freight accounted for $63,814. The net earnings were $103,269.48, and dividends paid amounted to $73,500 (49%).

The next year, with 6 locomotives and 137 cars, the dividends reached the remarkable figure of $105,000 (70%). In 1882, dividends dropped to a mere 18% ($27,000), and, as related under the OB&W, the road was sold after the close of the fiscal year to the Buffalo, New York and Philadelphia Ry., for $300,000. A new president, H. C. Jewett (p. 73), was elected but the other officers were held over.

For a few years none of the subsidiary roads of the BNY&P had a president, but by 1885 G. Clinton Gardner, the president and receiver of the BNY&P became president of all of them. In subsequent Poor's Manuals of Railroads, these roads were listed separately under the parent company, without inclusion of many details.

As a retrenchment measure taken by the Western New York and Pennsylvania in 1893 the Kendall and Eldred was closed; the last train was run on Dec. 9, 1893, and the rails were taken up in July, 1894. The road was formally abandoned in 1898.

In spite of the high dividends paid, it would seem that there must have been considerable competition with the Bradford, Bordell and Kinzua, over the longer distance between Bradford and Eldred, especially since the latter road operated through cars to Wellsville until 1893. This conclusion receives support in that the BB&K outlived the K&E by at least a decade (Bulletin 78, p. 77).

Bradford Railway—Kinzua Railway

After the Olean, Bradford and Warren had been completed from Olean to Bradford there was considerable agitation for extending it to Warren. The residents of that village, however, were not enthusiastic, and did not raise funds to encourage the promoters of the extension. The OB&W completed the survey to Warren but never did any construction.

Meanwhile another group sponsored a narrow gauge railroad extending in a southwesterly direction from Bradford to Kinzua in Warren County, and this was shortly constructed in two portions under the names of the Bradford Railway, and the Kinzua Railway. In following the progress of these two railways, the contemporary "Warren Mail" always wrote of them as the extension of the OB&W; this confuses the search for facts.

There was some disagreement as to the route to be followed, as well as opposition from the Buffalo, Pittsburg and Western RR Co. (successor to a Ry. Co. of the same name).

At the time the Kinzua Ry. Co. constructed its line (1881) the BP&W had not built their railroad to Kinzua. The latter, from Warren, was not completed until May 7, 1882; it was extended to Salamanca by December. The BP&W also built from Buffalo to Brocton, N. Y. With the above line, as well as those already in existence at the time of the consolidation in 1881, the BP&W had a road between Oil City and Buffalo, (2) Irvinetown, Pa., and Warren to Salamanca, which, with branches, totaled 252 miles. Furthermore, the BP&W and the BNY&P were in the process of coming under the control of the same syndicate at this time.

A Big Level and Bradford RR Co. was reported in the "Warren Mail" and in the "Railroad Gazette" of Sept. 30, 1881 as having been organized in that month. There is no further reference to this company in Poor's Manuals or in the Railroad Gazette, but the Warren Mail for March 27, 1883 reported that it had been consolidated with the BP&W. This appears to be incorrect, for Miss Ferguson located these details: "The Big Level and Bradford was incorporated on Sept. 13, 1881, under the General Laws of Pennsylvania, to build a road from Kane to Howard Hill (now Mt. Jewett). It did not construct any road or acquire any property. It was controlled by John L. Kane, through ownership of capital stock. On June 19, 1883, it was consolidated with the Pittsburgh, Bradford and Buffalo Ry. Co. to form The Pittsburgh, Bradford and Buffalo Ry. Co. Terms of the consolidation guaranteed construction of the line from Kane to Mt. Jewett. The Pittsburgh, Bradford and Buffalo Ry. Co. was consolidated with the Pittsburgh and Western RR Co. The latter is now a part of the B&O. The only listing in the Annual Report of the Secretary of Internal Affairs is in 1884 as follows: Big Level. Elisha K. Kane, president, General Offices at Kane, McKean Co., Pa. . . . Length of main line from Kane to Mt. Jewett, 13 miles, all in Pa.

"It disappeared from the annual reports and . . . was never listed in Poor's Manuals. The above information is from the I. C. C. Valuation Reports."

As finally decided upon the Bradford Ry. extended 12.15 mi. from the Erie crossing in the town of Bradford south to Custer City and then to a point between Lafayette and Hamilton Townships, at first called Marshtown, and subsequently Marshburg.[11] The Kinzua Ry. began in

[11]At this time (1882) a line between Bradford and Oil City, "the grandest narrow gauge in America" was projected; one of the component roads was to be the Bradford and Tiona, covering the 12 miles between Marshburg and Tiona. Nothing ever came of this wild idea.

Marshburg at the end of the Kinzua, crossed the height of land, and followed the Chappel Fork of Kinzua Creek to Kinzua (14.04 mi.). From that point it was intended to reach Warren along the banks of the Allegheny River. On Nov. 30, 1880, it was decided that the road would be built even without Warren capital, and it was so noted on Jan. 18, 1881. The 3-ft. Bradford Ry. was chartered on Jan. 7, 1881, and the Kinzua Ry. Co. was chartered on Jan. 18th, both with a capital stock of $100,000.

The officers and directors, which were the same on both roads, were as follows:

Pres.	S. S. Jewett, of Buffalo (p. 73)
Sect.	Charles S. Cary, of Olean (p. 73)
Treas.	F. S. Buell, of Buffalo (p. 69)
	George A. Berry, of Bradford
	B. D. Hamlin, of Smethport (p. 77)
	D. R. Hamlin, of Smethport (p. 77)
	H. C. Jewett, of Buffalo (p. 73)
	W. G. Roberts, of Eldred

Mr. Berry was also a director of the Ketner, St. Marys and Shawmut RR. in Elk City, and of the paper road Bradford, DeGolia and Smethport. He was a pioneer in the brick industry, and "a scholarly reasoner." Mr. Roberts was also a director of the Kendall and Eldred (p. 78). The office was in Buffalo.

On Mar. 8, the "Warren Mail" noted that prospects were bright for early construction to Kinzua only, and then to continue to Warren by means of a third rail added to the existing BP&W. The builders were Craigie, Rafferty and Youmans, who had 300 men at work in April. By May 17th 14 miles had been graded, with the construction locomotive in sight of Custer City; it was expected that Marshburg would be reached by June 15th. On Sept. 13th the construction train reached the Kinzua Valley, and the road was opened by Sept. 27th with two trains daily between Bradford and Kinzua. The American Express Co. opened offices in Marshburg and in Kinzua early in October. The Bradford Ry. also had 1.8 mi. of standard gauge road in the town of Bradford.

In May, 1882, the trains ran "through" from Bradford to Warren by a change of trucks at Kinzua. The "Warren Ledger" for May 19th noted that Bradford now had 47 passenger train arrivals every day, and that a through train would soon run between Titusville and Bradford, via Kinzua. The "Forest Republican" for Jan. 25, 1888 reported that the Kinzua was the finest yard-wide railroad in the world, winding its way over hills, across deep ravines, through lumber camps, and oil country, with picturesque scenery on all sides.

Although the Bradford and the Kinzua are listed separately in Poor's (1882, pp. 225, 248) the rolling stock is practically the same, and the financial statements are identical, leading one to conclude that they were treated as a unit. The cost of the road and equipment (one locomotive and 44 cars) was $168,305.40. The operations were likewise the same, although that of the Bradford is said to cover only six months! A deficit of $1,200 was incurred.

B. & G. #3, after wreck at South Shaftsbury, Vermont. Fitchburg #146 in rear.

The two short lines were consolidated under the name of the Bradford and Kinzua Railroad Co., and the entire stock of the new company was then acquired by the Buffalo, New York and Philadelphia Ry. Co. under a lease dated Dec. 8, 1881.[12] It was widened to standard gauge in 1889. For many years the roads were listed separately in Poor's.

The stations, listed in the April, 1882, guide under the BNY&P, Bradford and Kinzua Division, "Bradford Short Line," were these: Bradford, Toad Hollow, DeGolia, Custer City, Song Bird, Quintuple, Elmwood, West Branch, Marshburg, Andersons,[13] Kinzua. In 1902, however, after the ex-Bradford Ry. had been abandoned the Kinzua Ry. end showed these stations: 0.0, Kinzua; 2.9, Dew Drop; 4.7, Morrisons; 6.2, Neilly; 8.4, Watsonville; 11.1, White Gravel; 12.8, Gates; 16, Marshburg. One passenger train ran each way, daily except Sunday, between Morrisons and Marshburg. By 1912 this line was used for freight only.

In 1896 the 12.10 mi. of the former Bradford Ry. between Marshburg and the Erie RR. crossing in Bradford was abandoned, the rails being removed during the following decade. All except 0.05 mi. of the standard gauge portion was abandoned in 1906. This small segment, and the 2.29 mi. residue of the Olean, Bradford and Warren were consolidated in 1911 under the name Bradford Railroad. The latter was merged into the WNY&P on Jan. 29, 1932. This small segment in Bradford is isolated from the rest of the PRR; it is reached by trackage rights, which have been exercised since 1896, over the Buffalo, Rochester & Pittsburgh from Riverside Jct., N. Y.

In 1906 only the 12.96 mi. of the former Kinzua Ry. between Kinzua and Gates Siding was being operated, the 1.08 mi. between the latter point and Marshburg having been abandoned. In 1927 the 7.82 mi. from Morrisons to Gates Siding was abandoned. At the present time only the 5.14 mi. from Kinzua to Morrisons remain.

On June 30, 1911, the Kinzua Ry. and the Kinzua Valley Ry. (p. 82), which combination had for some years been known as the Kinzua Valley Branch of the Pennsylvania RR were merged, becoming the Kinzua Railroad Co.,[14] and on Nov. 2nd the latter was absorbed into the WNY&P.

As a flood control project on the Allegheny River, the United States Government planned to build a dam about two miles south of the village of Kinzua. Its construction would necessitate the abandonment by the Pennsylvania RR. of a part of its Salamanca Branch along the river from Warren to about one mile north of Red House, N. Y.; also the railroad south from Kinzua, along Kinzua Creek to a place just across the border, in Hamlin Township.

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[12]The financial statement of Dec. 31, 1881, in the 1882 Manual (p. 225), is followed by this statement: "Since the close of the fiscal year this line has been consolidated with the Kinzua Ry. . . . ." On p. 131 of the 1883 Poor's, it states that these roads were acquired in 1882. Mr. Willcox and Mr. Gilbert of the Pennsylvania RR. give the date above.

[13]This was 16 mi. from Bradford, hence between Watsonville and White Gravel.

[14]The listing Kinzua RR. Co. in the 1882 Poor's is obviously an error, for elsewhere it is mentioned as Railway; the railroad company did not come into existence until 1911.

Kinzua Valley

The Kinzua Valley RR. Co., organized by the Bullis Lumber Co., was chartered in Pennsylvania on Mar. 30, 1887, to build a standard gauge road from a point on the New York, Lake Erie and Western Coal and RR Co. near Riderville or West Alton in Lafayette Township, to a point on the Bradford Ry. at or near Morrisons in Hamilton Township. Its authorized capital stock was $140,000. The company commenced construction in May, 1891, and completed its railroad between Morrisons and Westline, 9.9 mi., early in 1892; its cost was $110,950. Its primary purpose was to afford a means of getting the lumber out of the area.

The officers and directors were as follows:

Pres. S. S. Bullis (Bulletin 76, p. 40)
C. A. Backer
J. C. French
Peter McNeil
George L. Roberts (Bulletin 78, p. 74)
H. B. Weaver
C. D. Williams (Bulletin 78, p. 65)

The office was at Westline.

Peter McNeil was also a director of the Allegheny and Kinzua (Bulletin 78, p. 82).

The entire capital stock was purchased by the Western New York and Pennsylvania in 1892, after which the officers and directors were as follows:

Pres.	Samuel DeCoursey, of Philadelphia
Vice-pres.	Nicholas Thouron, of Philadelphia
Sect.-treas.	F. S. Buell, of Buffalo (p. 90)
Gen. Solicitor	Frank Rumsey, of Buffalo
	Robert Bell, of Buffalo
	S. S. Bullis, of Olean (Bulletin 76, p. 61)
	D. H. Jack, of Bradford (Bulletin 76, p. 62)
	A. J. Thompson, of Titusville

The road had one locomotive and ten cars.

There were three new officers in 1903, all of Philadelphia.

Pres.	W. H. Barnes
Sect.	A. C. Heston
Treas.	H. P. Connor

The interest of the Pennsylvania RR is obvious. DeCoursey was pres., and Thouron a director of the WNY&P; Barnes was a later pres. of the WNY&P, and of the Union Terminal RR in Buffalo, while Heston was the secretary of these same roads. Barnes was also a director of the following companies of the PRR: the Monongahela; Philadelphia, Baltimore and Washington; Pennsylvania Co.; West Jersey and Seashore; Pittsburgh, Cincinnati, Chicago and St. Louis.

The stops on the Kinzua Valley were: 0.0, Morrisons; Dunkle; 5.4, Root Run; 5.8, Springer; Mead Run; Markham Run; 7.5, Whiting; Libby; 9.9, Westline. In 1902 there was one passenger train each way, daily except Sunday between Morrisons and Westline; by 1912 this service had been reduced to Mondays only.

The Kinzua Valley was operated by the Western New York and Pennsylvania Ry. Co. and its predecessor from April 15, 1892 to Aug. 1, 1900 without a written agreement, when the operation was taken over by the Pennsylvania RR as lessee of the WNY&P, under its lease of that property dated July 14, 1900. On June 30, 1911, the Kinzua Valley and Kinzua Rys. were merged as the Kinzua RR. Co., and the corporate property, rights and franchises were acquired by the Western New York and Pennsylvania on Nov. 2nd of the same year. Together the Kinzua and Kinzua Valley Rys. form the present Kinzua Branch of the WNY&P (p. 71), extending 14.96 mi. between Kinzua and Westline.

Valley

There were several standard gauge railroads in McKean County that were built by lumber interests. One group of these, which terminated in the (second) Valley RR., was constructed for the Weed Lumber Co. (later, Weed & Mundy) of Bradford. Of this group, only the (second) Valley maintained a passenger schedule, and continued in operation up to the present.

It is unfortunate, from the viewpoint of the historian at least, that there have been several short lines in the United States which have been named Valley RR. Those herein described are the two which had one terminus at Westline, Pa., and which are often indexed as Valley RR. (of Pa.).

The first Valley RR. (of Pa.) was organized on Dec. 22, 1893, to build a railroad from Westline in a westerly direction to Bell's, with the ultimate view of getting out the lumber in the area.

The officers and directors, all of Bradford except the president and one director, were as follows:

Pres. and Treas.	C. A. Weed, of Binghamton, N. Y.
Vice-pres. and Aud.	S. A. Mundy
Sect.	S. T. Swartz
Gen. Mgr.	J. H. Beardsley
	E. M. Bell
	Thomas Golding
	H. F. Mundy
	H. F. Mundy, Jr.
	E. R. Schoonmaker, of Limestone, N. Y.
	Frank Williams

The office was at Binghamton.

Beardsley, Bell, H. F. Mundy, Jr., S. A. Mundy, Swartz, and Weed all held similar positions on the Ketner, St. Marys and Shawmut RR in Elk County.

S. A. Mundy, the lumber dealer, was born on May 3, 1858. He was educated at Williamsport, and at the age of 18 entered into the lumber business in Buffalo. He subsequently moved to Bradford, entering the employ of the Weed Lumber Co. The latter owned 18,000 acres and gave employment to 400 men. Mundy was president of the KStM&S.

The road was opened to Thundershower (5.75 mi.) on Aug. 1, 1896, and to Bell's (9 mi.) in 1897. It reported two locomotives and 21 cars, a net of $8,274 in 1897 and a surplus of $4,560 in 1900. The only record located thereafter was in 1903, which states that the road was abandoned in August, 1900! The next entry under this name appears in 1905, and is the second Valley RR.

Mr. Caverly recalls that the firm of Weed and Mundy operated a sawmill at Glen Charles, up Turnip Run, about 2.5 miles from Westline, and that the Valley RR. handled the lumber to the Kinzua Valley branch of the Pennsylvania RR. at Day Jct.

The (second) Valley RR. Co. of Pennsylvania was chartered on May 16, 1901, with a capital stock of $15,000, to build a standard gauge road between Westline and Day Jct. (1.5 mi.) where it would connect with the former Kinzua Valley RR. The cost of this short line was given as $9,000, and of the equipment as $11,400. The second Valley RR. bought the roadbed of its predecessor, that company closing up its affairs and going out of business. The second company operated only 1.5 miles of the 9 operated by the first company.

The officers and directors, all of Westline, were as follows:

Pres.	E. L. Day
Sect. treas.	R. D. Day
Aud.	W. T. Madigan
	Neil Paterson
	John Redmond
	Edward Wilmont

The office was at Westline.

The Valley RR. leased the Kinzua Hemlock RR. on July 1, 1905, for an indefinite term at $1. per year, after the termination of the lease of that road to the MtJK&R in 1904 and operated it thereafter. It owned one locomotive and 29 freight cars, and by the lease acquired three locomotives and 31 cars (two of which were passenger). It reported net earnings of $86 for 1904.

The (second) Valley RR. had trackage of 1.5 mi. between Camp Halsey and Kushequa from the Mt. Jewett, Kinzua and Riterville in 1909 and for a few prior years; it appears to have purchased this segment before 1911, but the records could not be located.

Mr. Caverly thinks that the Day Chemical Co. bought the Kinzua Hemlock RR. from Elisha Kane about 1910, and that about 1915 it was leased to the Pennsylvania Lumber Co., who cleared the wood out of the area. Mr. E. O'N. Kane, however, says his father sold it during World War I. The former Kinzua Hemlock roadbed is now a state highway.

As late as 1931 the Valley RR. operated a train between Westline and Kushequa, for passengers to connect with the Mt. Jewett, Kinzua and Riterville on Wed. and Sat. only. Eastbound the time required was one hour and a quarter, but only one hour was needed for the westbound trip.

In 1933 there were new officers, and the office was in Olean, N. Y.

Pres.	R. M. Hancock
Vice-pres. and Gen. supt.	D. M. Hancock
Sect.-treas. and Aud.	J. A. McCormack
Gen. Freight Agt.	J. G. McGill

In 1944 the Valley RR. had an income of $11,429, from which it realized a profit of $1,722. The Pennsylvania RR. pays the Valley $14.90 per car per mile for hauling freight over its tracks to Kinzua, rather than operate the branch themselves.

The Susquehanna Chemical Co. purchased the Westline plant and acquired the capital stock of the Valley RR. in early 1946, at which time it was operated by the Union Charcoal Co. The original plant at Westline was built by the Day Chemical Co. All these companies were wood distillation plants, producing charcoal and acetic acid from the waste wood in the area.

Currently the Valley RR. enjoys the distinction of being the shortest railroad in the U. S. under the jurisdiction of the Interstate Commerce Commission. It owns one mile in Westline; with one locomotive it operates the Kinzua branch of the Pennsylvania RR. (formerly the Kinzua RR. Co.), between Kinzua and Westline (14.96 mi.). The Susquehanna Chemical Co. owns the Valley RR., the Clarion River and the residue of the 3-foot Tionesta Valley.

At present there are two Shay geared locomotives on the Valley. The larger one is No. 2, built by Lima in 1922 for the New Hampshire Stave and Heading Mill[15] at No. Stratford, N. H.; it is a class 70-3 with a tractive force of 30,400 pounds. The smaller, No. 1, is a class 40-2, origin unknown, with a tractive force of only 16,900 pounds.[16] The company is contemplating the purchase of a 44-diesel-electric to replace No. 1.

I am pleased to acknowledge the assistance of President Crowan of the Susquehanna Chemical Corporation in supplying some of the data given herewith.

[15]At that time this company was an affiliate of the Warner Sugar Co.

[16]In an article in the Baltimore and Ohio magazine for Sept., 1946, it is suggested that this may have belonged to the Ridgway Niagara.

The Bennington & Glastenbury Railroad

By F. Stewart Graham

One of Vermont's lesser known and almost forgotten railroads, this railroad was chartered under the laws of Vermont, October 31st, 1855, as the Bennington & Glastenbury Railroad, Mining and Manufacturing Company. The line's western terminus was in Bennington, where it connected with the Lebanon Springs Railroad and the Bennington & Rutland R. R., in the vicinity of the present Rutland Railroad freight house. It proceeded east along County Street, crossed the Roaring Branch and followed the valleys of Walloomsac Brook and Bolles Brook into Glastenbury, a distance of about eight miles.

The Bennington County Gazeteer and Directory, published in 1880-1881, states that "In 1854, Messrs. R. C. Root, John Harper and Samuel H. Cornell, all of New York City, acquired lands in Sunderland and Glastenbury, amounting to about six miles square; subsequently T. W. Park and Wm. Duncan Butler purchased Cornell's interest and part of Harper's. To develop this property a company was formed and, in 1872, the Bennington & Glastenbury Railroad was built, connecting with other railroads in Bennington . . . The whole length of the railroad, including sidings, is nine miles. In the first eight miles above Bennington an elevation of 1200 feet is reached. A portion of the grade on the branch is at the rate of 250 feet (per mile) and the steepest on the main line is 230 feet per mile. This is probably the steepest grade in the United States, on any railroad of regular gauge run by traction power. Before building the road, the projectors were advised by many civil engineers that it would be impossible to run the road with such a grade. But Mr. John B. Jervis, of Croton Aqueduct and Erie Railroad experience, a gentleman in whom Mr. Root had much confidence, said, "Go ahead, good machinery will work," and the wisdom of his advice is verified in the fact that, though the road has been run steadily for eight years, often with trains of twelve to fourteen cars loaded with lumber or coal, no accident of importance or any injury to trainmen or passengers has ever occurred. Conscious of the importance of continual caution, it has uniformly been exercised by the employees."

The road was built primarily for the purpose of handling lumber from Glastenbury Mountain and wood alcohol, charcoal and other chemicals from the kilns operated by the company. Later, a summer resort was established, centering around White Crow Inn, and quite a passenger traffic developed. Mail was carried between 1873 and 1878.

The railroad operated until March, 1889, although it was closed for three weeks as a result of the "blizzard of '88." Official records of the company apparently have long since ceased to exist, but it appears that the road was idle for a few years. The Bennington "Banner," of October 30th, 1894, stated that "a bill to incorporate the Bennington & Woodford Electric Railroad is now before the Legislature of Vermont" and, on November 13th, 1894, further states that "it is proposed to run

the line of this road from the B. & R. depot, up River and North Streets, to connect with the B. & G., *now unused*, and with which road arrangements have been made for the use of its tracks."

The road was subsequently electrified, but the track was never laid on River and North Streets, the line's terminus being in the vicinity of North and County Streets. It was operated with single truck trolley cars until the disastrous flood of October 5th, 1898 caused so much damage to the company's property that operations were permanently discontinued.

During the period of electrical operation, carloads of freight were handled over the line by steam locomotives of the B. & R. A system of regenerative braking was employed on the trolley cars, which coasted by gravity for most of the distance from Glastenbury to Bennington, the electrical energy thus developed being directed back to the trolley wire by switches operated by the motorman.

A portion of the line on County Street, in Bennington, is still in use, serving as a siding of the Rutland R. R. to the coal yards of the H. W. Myers Company. Other parts of the roadbed can still be seen, further up the valley.

At this time, there is some question as to the total number of locomotives operated by the B. & G., although it is generally conceded that the road never had more than one at a time. In the December, 1898, issue of "Locomotive Engineering" it is stated that "the first locomotive on the B. & G. was the "Housatonic," bought from the Housatonic Railroad, in 1873. It was probably built prior to 1852-3, and had a Bury boiler. Steam driver brakes were applied at Bennington, Vt. after two or three years of use, the engine was sold to Mansfield & Stimson, Machinists, Rutland, Vt., who removed one cylinder and sold her to operate a sawmill." Such being the case, the "Housatonic" was a 4-4-0 type, built by Rogers, Ketchum & Grosvenor, October 22nd, 1849, shop No. 191. Cylinders 13½" x 20". Diameter of drivers, 60".

A locomotive, about which there is little available information, may have entered the service of the B. & G. with the passing of the "Housatonic." On several occasions, the Bennington "Banner" has published a picture purporting to be one of the B. & G. locomotives. It is of a double-ender, showing the engineer (?) in white overalls, unheard of in Vermont, and scenery which appears to be tropical, rather than that of the Green Mountains. One or more of the men, who were interested in the Glastenbury road, were also involved in the early Panama Railroad, and this suggests that a locomotive, perhaps the one referred to above, did at one time work on the B. & G. One informant stated that the line had tried, for a short time, one locomotive that was too heavy for the tracks and too powerful for the rolling equipment.

In any event, the road's final engine was bought from the Shepaug, Litchfield & Northern, their first No. 3, named "Weantinaug," Rogers No. 1910, built September 29th, 1871. Cylinders, 15" x 22"; diameter drivers, 54". This engine was evidently purchased in 1875 or 1876, and was renamed "R. C. Root," after the president of the company. It remained in service until steam operation was discontinued and then

passed to the ownership of the Bennington & Rutland, becoming their No. 3. On November 5th, 1894, while in roadway service and running backward, it collided with a northbound passenger train, pulled by Fitchburg No. 146, at South Shaftsbury, Vt., and was so badly damaged that it was never repaired.

The B. & G. had no shops of its own, and its locomotives were sent to the Rutland shops, of the Rutland Railroad, for general repairs, about every two years, and substitute engines were obtained from that road, during these repair periods. None of the B. & G. equipment had air brakes, all braking having been done by hand.

Early State railroad reports show the gauge of this road to have been 4′ 8″, and call attention to the fact that it is one-half inch less than standard gauge. Although this was undoubtedly the case, it probably made little difference in the road's operation, as standard gauge engines were bought for use on the road, and cars and locomotives of the standard gauge Bennington & Rutland R. R. were used on the Glastenbury road.

The State report for 1892 states that the roadbed and tracks were in a most deplorable condition and were unfit for any use whatsoever.

Worth Reading

Compiled by ELIZABETH O. CULLEN, *Librarian,*

Bureau of Railway Economics, Association of American Railroads,

Washington 6, D. C.

BOOKS AND PAMPHLETS

A Book That Gathers No Dust—The Official Guide of the Railways, by Association of American Railroads. 6 mimeo. p., with two p. of photographs. Sent to editors of railroad employees' magazines, and available to others on request to A. A. R., Attn., C. J. Corliss, 735 Transportation Bldg., Washington 6, D. C. ". . . Now approaching its 83rd year of continuous service, this 1500-page reference volume is not only the oldest periodical of its type in the American transportation field, but, in point of contents, it is the largest monthly publication in the world . . ."

British Railways—Today and Tomorrow, by Railway Executive, British Transport Commission, 222 Marylebone Road, London, N. W. 1, England. Price not stated. 48 p. Illus. Folded map. "Railways and regions" p. 3, but for regions from April 2, 1950, *see* Revision of Regional Boundaries, British Railways, *in* The Railway Gazette, February 17, 1950, pp. 186-187, with map. "Named Expresses" pp. 41-42. "Mileposts in British railway history" [1804-1948], pp. 45-48.

British Transport Commission. First Annual Report—Statement of Accounts and Statistics for the year ended 31st December 1948. vii. 424 p. For sale by British Information Services Sales Office, 30 Rockefeller Plaza, New York 20, N. Y., $1.60. Published by H. M. Stationery Office, London, England. "The Railway Executive" pp. 71-127. "The London Transport Executive" pp. 134-159.

The Car Builders' Cyclopedia of American Practice—1949-1951, compiled and edited for the Association of American Railroads—Mechanical Division. Editor, C. B. Peck. 1308 p. incl. illus., diagrams, tables and bibliographies. Simmons-Boardman Publishing Corporation, 30 Church St., New York 7, N. Y. $8.00. ". . . Many new designs of cars and appliances in the field of railway car construction have been made since the publication of the previous edition (1946). These have been included as far as possible in order that this Edition might contain the latest practices in American Car Construction and Equipment . . ." Foreword, p. 2. *Dictionary of Car Terms Used in Railway Practice* pp. 7-67. This is the 18th edition. For reprint of first edition, *see* The Original 1879 Car-Builder's Dictionary's Illustrations, Car Plans and Advertisements.

. . . *The Current Transportation Situation—Hearings, April 4, 1950—pursuant to S. Res. 50,* before Subcommittee on Land and Water Transportation of U. S. Congress. Senate. Committee on Interstate and Foreign Commerce. Will be printed at U. S. Govt. Print. Off. Abstracts and summaries, meanwhile, will be printed in Railway Age, Traffic World, and other transportation periodicals. When this list was

prepared, Senator Francis J. Myers of Pennsylvania, chairman of the subcommittee, had issued a press release listing the dates in April, when representatives of transportation organizations were scheduled to testify. Statements on civil aviation problems were made before this Senate Committee on June 10, 1949, and January 30, 1950, and now the subcommittee will hear about other forms of transportation.

The First Transcontinental Railroad—Central Pacific-Union Pacific, by John Debo Galloway. x, [2], 319 p. Illustrations. End-paper maps: Central Pacific, Jan. 8, 1863-May 10, 1869; Union Pacific, Dec. 2, 1863-May 10, 1869. Bibliography pp. 305-309. Biographical sketch of author by Walter L. Huber, pp. ix-x, begins: "John Debo Galloway will ever be rated as one of the greatest engineers who had an important part in the development of Western America . . ."

Footprints of the Dragon; A Story of the Chinese and the Pacific Railways, by Virginia A. Oakes. Illustrated by Tyrus Wong. ix, 240 p. Philadelphia 7, Penna., John C. Winston Co. $2.50.

Four Generations on the Line—Highlights Along the Milwaukee Road's First Hundred Years, by Chicago, Milwaukee, St. Paul & Pacific R. R. Co., Union Station, Chicago 6, Ill. 46 p. Illus. End-paper maps. "Birth of a Railroad 1850-1875—Excerpts from a Farmer's Diary" pp. 4-16. "An Era of Expansion 1875-1900—Excerpts from the Diary of a Telegraph Operator" pp. 17-27. "Over the Mountains 1900-1925—Excerpts from the Diary of a Western Merchant" pp. 28-35. "End of a Century 1925-1950—Excerpts from the Letters of a Railroad-Minded Family" pp. 36-48. ". . . During the next century, we will continue to move forward with the people with whom our lot has been cast. Our part of the country is young and vigorous and great days lie ahead . . ." Foreword, p. 3, by C. H. Buford, president.

Guide to the Burlington Archives in The Newberry Library 1851-1901, compiled by Elizabeth Coleman Jackson and Carolyn Curtis. xxiii, 374 p. Chicago 10, Ill., The Newberry Library. Price not stated.

Historical Sketch of Rutland Railroad Company 1849-1949—Issued on this Centennial Date, December 18, 1949, by the Company, Rutland, Vermont. Cover-title [26] p. List of presidents since the establishment p. [26].

Narrow Gauge Railways in America, by Howard Fleming. Originally published—New York—1875. Republished 1949 by Grahame H. Hardy, Oakland, Calif., edited by Mr. Hardy and Paul Darrell, with Foreword by Lucius Beebe, and List of Narrow Gauge Railways in America 1871-1949, compiled by Brian Thompson. 101, [39] p. incl. illustrations that are engravings from originals of narrow gauge locomotives, passenger and freight cars, and profiles. Decorations by E. S. Hammack. Deluxe ed. $7.50. Regular edition $5.00.

Nationalized Transport Operations in Great Britain (First Year: 1948), by Bureau of Railway Economics, Association of American Railroads, Washington 6, D. C. 54 p. incl. tables. *Its* Special Series No. 79, based on British Transport Commission's First annual report. Free on request to BRE, AAR.

The Original 1879 Car Builder's Dictionary's Illustrations, Car Plans and Advertisements, compiled for the Master Car-Builders' Association by Matthias N. Forney, Leander Garey and Calvin A. Smith. First published by The Railroad Gazette, New York, 1879. Republished by Simmons-Boardman Publishing Corporation, 30 Church Street, New York 7, 1949. xiv, pp. 190-491; Advertisements, 84 p. Illus., Diagrs. $3.95. Preface by Republishers, pp. vi-vii, mentions: ". . . this reissue . . . is an attempt to satisfy in part the demands of ever-increasing numbers of model makers, railroad historians, and rail enthusiasts generally for authentic American railroadiana . . . In the seventy years that have passed since the Car-Builder's Dictionary was first issued, the volume has grown from its modest beginnings to today's monumental eighteenth edition of the Car Builders' Cyclopedia . . ."

Railroad 'Rithmetic, edited by Olive W. Dennis, research engineer, B & O Railroad. 2 v. Free on request to R. M. Van Sant, director of public relations, Room 1202, B & O Bldg., Baltimore 1, Maryland. "The mathematical problems . . . are offered as a supplement to those in standard textbooks . . ." Book I—Supplementary railroad transportation problems for elementary schools. Book II—Supplementary railroad transportation problems for secondary schools.

Railroads of New York—A Picture Story of Railroading In and Around New York City, by G. W. O'Connor. 144 p. Map folded in pocket. $4.00. "This book by a former New York railroad man was written to serve as a guide for railfans who visit the metropolis, and as a pictorial survey for fans and others who may be unable to make the trip and see for themselves. It depicts railroads in New York City and the New York commuting area, which is roughly within a 75-mile radius of City Hall in lower Manhattan."

Report on Streamline, Light-Weight, High-Speed Passenger Trains —1950, by Coverdale & Colpitts, consulting engineers, 120 Wall St., New York 5, N. Y. 89 p. No price stated. "There are now in service on American railways 260 streamline trains . . . This is the seventh report this firm has issued on the results of streamline train operations . . ."

Routing and Misrouting of Freight, by Glenn L. Shinn, attorney-examiner, Interstate Commerce Commission. Cover-title, vii, 177 p. New York 7, New York, Simmons-Boardman Publishing Corporation, 30 Church St. $4.00. ". . . rights, obligations, liabilities explained and clarified . . ."

Who's Who in Railroading in North America—1949. 12th edition. [8], 827 p. New York 7, N. Y., Simmons-Boardman Publishing Corporation. $10.00. ". . . in this edition . . . promotion, transfers and retirements have required more or less major modifications of nearly every sketch which appeared in the previous edition, while the rise of newcomers to the top ranks of railroad personnel has resulted in the incorporation in this book of sketches of about 2,000 individuals not previously included."

ARTICLES IN PERIODICALS

Annual Speed Survey [1949], by Donald M. Steffee. Railroad Magazine, April 1950, pp. 14-45. ". . . Our 1945 Annual Speed Survey records 1572 separate start-to-stop schedules aggregating 81,711 miles timed at 60 mph., or better. This has now swelled to 2552 runs adding up to huge 141,700 miles—highest in railroad history . . ." . . . *Corresponding nomenclature in different countries of representative types of locomotive power*—Table listing 21 types of wheel arrangement, with U. S., British, French, German—old and new, and Suggested Lettering for engines in India, by H. M. Chatterjee, production engineer, Bengal Nagpur Ry. P. 271, *in his* Classification of Locomotive Power, in Quarterly Technical Bulletin No. 95, October 1949, issued by The Director, Civil Engineering, Railway Board, New Delhi, India.

Cost of Railway Transportation over the Past 100 Years, compiled by American Railway Engineering Association. Comm. 16—Economics of Railway Location and Operation. A. R. E. A. Bulletin 483, November 1949. Vol. 51: 111-115.

The Eastern Punjab Railway—In the First Two Years in the Life of the System Notable Progress Has Been Made, by Daya Chand, chief administrative officer. Railway Gazette, March 3, 1950, pp. 248-249, 257. ". . . a network of 1,889 route miles and 2,139 track miles, serves a wide territory comprising the entire province of East Punjab, Delhi, a portion of the United Provinces, two newly-formed States unions (Himachal Pradesh and the Patiala and East Punjab States Union), and Jammu and Kashmir. Cities served include two capitals—Delhi, capital of the country, and Simla, provisional capital of East Punjab . . . It was created from the extensive network of the North Western Railway which remained in India . . ." Illus. Map showing connections in India and Pakistan, p. 248. Editorial comment p. 238.

Economics of Railway Location and Operation—Index of Reports of Comm. 16 . . . in Proceedings, A. R. E. A. 1910 to 1948 Inclusive, prepared by Comm. 16—Economics of Railway Location and Operation, American Railway Engineering Association. *In* A. R. E. A. Bulletin 483, November 1949, pp. 119-124. A short cut to source materials published as results of studies for the past 38 years.

Eight Wheels and a Box, by A. N. Campbell, mechanical engineer (car) on the staff of Chief of Motive Power and Car Equipment, Canadian National Railways. Canadian Railway Club, Montreal, Canada. Official Proceedings, November 14, 1949, pp. 23-42. "One point I wish to make in my talk tonight, if I make no other, is that there has been a tremendous amount of thought given to railway car design in the past by scores of very clever men. There is much yet to be learned; otherwise, railroads would not be spending millions of dollars yearly on research in the field. I am not setting myself up as an authority on the subject but intend simply to leave with you a few thoughts on the subject of railway freight car development, past, present and future . . ." Abstracts in Brotherhood of Locomotive Firemen and Enginemen's

Magazine, March 1950, pp. 163-170, with illustrations; in Railway Age, March 11, 1950, pp. 505-509, with illustrations and note: "An interpretive review in non-technical terms of the evolution of the present-day box car and what is being done toward its continued development."

Growth of International Freight Traffic [in Europe for the past 100 years]. Railway Gazette, February 24, 1950, p. 208. Editorial summary of paper by R. E. Sinfield, continental superintendent, Southern Region, British Railways, given on Feb. 15, 1950.

The Louisville & Nashville Employes' Magazine, March 1950—Anniversary Issue: 100 Years L & N Railroad—25 Years L & N Magazine. Includes: pp. 4-18, "100 Years Young—That's the L. & N.!" by R. R. South. Illus. p. 18, *The Presidents of the L. & N., 1850-1950.* Photos. pp. 20-27, 64, *The Big Biography.* "This 301st issue . . . is the latest chapter in a history-recording assignment that began 25 years ago." Illustrated.

Nature Is Wonderful, by Paul McGuire. (Railroad Magazine, April 1950, pp. 78-86. Illustrated. ". . . Few amateur naturalists have a greater opportunity to observe the Flora and fauna of a locality than does a section foreman who must trespass the haunts of wild creatures every day of the year. My twenty-mile section begins in wild Clear Creek Canyon, . . . Now a well-organized section gang sees everything within a half mile of the track . . ." What turns up in the way of worms, snakes of assorted sizes and varieties, skunks, and so forth, in southwestern states, in passing, and as "problems" that have to be "solved," will surprise and interest readers in other parts of the country, especially those who have to go to zoos and botanical gardens to see wild life of any kind.

Philadelphia's Influence on Pennsylvania Transportation Development, by Dr. Homer T. Rosenberger. Monthly Bulletin, Pennsylvania Department of Internal Affairs, Harrisburg, Penna., November 1949, pp. 3-14.

Planned Railway Development in the Soviet Union. Railway Gazette, November 18, 1949, p. 581. Accomplishments under the 3rd Five-Year Plan (1946-1950) in new lines constructed ". . . mainly to safeguard the political and military predominance of the Soviet Union in south-eastern and eastern Europe . . ." Electrification progress; rolling stock constructed or acquired as "war booty"; traffic handled—"The table below illustrates the astonishing growth of goods traffic . . . in the last two decades . . ." Present drive for shorter turn around time.

Postwar Conditions on Japanese Railways, by Col. Howard G. Hill, Corps of Engineers, The Engineer School, Fort Belvoir, Va. Brotherhood of Locomotive Firemen and Engineers' Magazine, March 1950, pp. 153-160. Illustrated with pictures of locomotives used in main-line freight and passenger service. Author's note, p. 160, mentions 3 new types of steam locomotives developed since he wrote this paper in June 1947. The paper was read originally in 1948 before Washington Post, Society of American Military Engineers, Washington, D. C., and later before 12 other engineering and U. S. Army Groups. ". . . The opinions expressed are his own" and he is now an instructor in military railroad construction.

Preparing for the Big Winds—Florida Railways Maintain Maximum Service Consistent with Safety During Hurricanes . . . Railway Age, December 3, 1949, pp. 48 (1006)—49 (1007). Illustrated.

The Railroader's Pursuit of Happiness, by F. S. Schwinn, asst. chief engineer, Missouri Pacific Lines. New England Railroad Club, Boston, Mass. [Meeting] December 13, 1949, pp. 115-120. ". . . quite recently, while driving past one of our large chemical plants at shift change time, I noted the masses of laughing, carefree faces. And it occurred to me that I might talk to you about the freedom those men and women exemplified; the freedom born at your historic Tea Party, the same freedom that became rooted on the slopes of your Bunker Hill and then spread to the far corners of our country, growing as our country grew; the freedom to pursue happiness. I felt that there could be no worthier subject for discussion during your Engineering Night than ways and means to insure the railroader's continuing freedom to pursue happiness . . ."

Railway Age—Freight Traffic Issue, March 25, 1950. (v. 128:523-631) p. 585, "How to curtail truck overloading quickly." pp. 586-588, "The Testing of Railway Materials," by R. E. Coughlan, chief metallurgist and engineer of tests, Chicago & North Western. Illustrated. pp. 589-591, "Rectiffer-Type Locomotives now being built for the Pennsylvania-Westinghouse engineers have taken advantage of recent developments to make a practicable application of this method, once abandoned, of combining high-voltage a. c. current distribution with d. c. traction motors" by A. C. Monteith, vice-pres. in charge of engineering, Westinghouse Electric Corp. Illustration, graphs, tables. Paper before New York Railroad Club, March 16, 1950, which will be printed in full in the club's Official Proceedings. pp. 596-601, *Transportation By Taxation—A User's View,* by Andrew H. Phelps, vice-pres., Westinghouse Electric Corp. "Self-Evident Truths" listed, pp. 596. Illustrated. pp. 602-603, "St. Louis Shippers to get New Freight Facility . . . New Modern Station planned by the Missouri Pacific to replace two widely separated structures now used." Illus., Maps. pp. 604-605, "REVOLUTIONARY Merchandise Distribution Plan WORKS," by A. C. Schier, vice-pres., traffic, General Foods. Illustrated. pp. 606-607, "How the Lackawanna Uses SPECIALIZED HANDLING DEVICES" . . . at Hoboken Terminal piers. Illustrated. pp. 608-609, "Tools for Perfect Shipping—Publicity, research, discussion to be marshalled in annual drive to cut $130 million 'Operation Rat-Hole'." Illustrated. " 'Who's Who' for Perfect Shipping Month—the National Management Committee" p. 609. pp. 610-612, " 'Custom-Made' L. C. L. Schedules for Individual New York Central Customers—The trap car revived. . . ." by W. R. Walworth, supervisor merchandise schedules, N. Y. C. System. Illustrations and tables. pp. 613-614, "Industries pay off on secondary line—Norfolk & Western's long-range policy of fostering manufacturing projects produces traffic dividends on Winston-Salem branch." Illustrated. ". . . Including the terminal cities, [Roanoke, Va. and Winston-Salem, N. C.], the six counties served by the line— . . . had a combined population of 144,290 in 1890, as compared with

381,638 in 1940, or an increase of 164 per cent. A further increase has occurred since . . ."

Railway Age—Passenger Progress Number, November 19, 1949. (v. 127, 871-950) and Maps. pp. 890-891, "Creating FUTURE Business." pp. 892-893, "The BUS as a Railroad Ally," pp. 894-895 "Is Flying for the Millions?" pp. 898-901, "Has the Motor Train Run Its Course? Dieselization is still available for cost reduction and possible traffic restoration in the necessary secondary services." pp. 902-909, "The Parade of the Streamliners." With Maps: Routes . . . Eastern U. S.; Southern U. S., and Western U. S.

Railway Age—Statistical and Outlook Number, January 7, 1950. (v. 128: 1-124). Illus., graphs, tables. pp. 158-165, "Huge CAPITAL OUTLAYS portend large economies." pp. 194-197, "Political Confusion Hampers CANADIAN ROADS" by Our Ottawa Correspondent. pp. 198-199, "MEXICAN RAILWAYS on the Mend in 1949" by J. M. Orozco Escobosa. pp. 200-213, "A Review of Railway Operations in 1949" by Julius H. Parmelee. When final figures for 1949 become available, Mr. Parmelee's review will be revised and reprinted as a Special Series Bulletin of the Bureau of Railway Economics, Association of American Railroads.

Railway Gazette—Overseas Railway Number 1949 [published Dec. 1949]. 128 p. Illustrations and Maps. pp. 2-7, *South African Railways and Harbours.* Map. pp. 8-10, *Rhodesia Railways.* Map. pp. 11-15, *East African Railways and Harbours.* Maps. pp. 16-17, *Nigerian Railway.* p. 18, *Gold Coast Government Railway.* p. 19, *Sierra Leone Railway.* Map. p. 20, *Sudan Railways.* Map. pp. 22-32, 81-87, *Railways of India, Pakistan and Ceylon.* Map. pp. 89-90, *Malayan Railway.* pp. 92-101, *Australia.* Maps. pp. 91, 93, 95. pp. 102-105. *New Zealand Government Railways.* Map. pp. 106-109, *Canada.* Map. pp. 113-116, *The Railways of Argentina.* Map. pp. 117-120, *The Railways of Brazil.* Map. pp. 121-122, *French National Railways.* Map. pp. 123-125, *The Swiss Federal Railways.* Map. pp. 126-128, Swedish State Railways. Map.

Revision of Regional Boundaries, British Railways—Transfer of administration of penetrating lines. Map showing British Railways Regional Boundaries as from April 2, 1950, p. 186. Editorial comment pp. 179-180.

Standard Locomotives in India. Table listing the 16 types of "new standard locomotives, Indian Government Railways" showing gages, classes, service, tractive effort, etc., adopted by the Railway Board to reduce train weights to suit manual firing with low-grade coal.

Les Transports En Commun de Voyageurs de la Région Parisienne, by M. Courson. Revue Générale des Chemins de Fer, Paris, France, Feb. 1950, pp. 47-52. Illustrations and Maps. Public transport facilities from 1622, when the first public vehicles were successful, to the present. "Région Parisienne" at present, comprises the city, and surrounding country from 40 or 50 kilometers distant. Map and illustrations.

Le Tunnel sous La Manche, by M. Gonon. Revue Générale des Chemins de Fer, Paris, France, January 1950, pp. 1-20. Reviews projects from 1802 when a highway tunnel was proposed to Napoleon, to 1947 when the British and French Parliamentary Committees for the Channel Tunnel were formed. Geologic and railroad route maps, profile of railroad tunnel, and diagram of proposed railroad and highway tunnel. Illustrated.

The Annual Meeting

The Annual Meeting of the Society was held at the Hotel Bellevue, Boston, Massachusetts at 3:00 P. M. on Sunday, May 7, 1950 with the following members present: Messrs. Becker, Cole, Fisher, Fogg, Forsyth, Graves, Greene, Harrison, Merrill, Schmid, Twomey, Walker, Whitaker and Yungmeyer.

President Fisher was Chairman of the meeting. The minutes of the last Annual Meeting were read and approved.

The reports of the President and Treasurer were unanimously approved as published.

Mr. Fisher announced with regret, the resignation of Warren Jacobs as a director of the Society and that of Sidney Withington as Vice President and director.

Interesting comments were then offered by the President upon the duties of the Directors and upon the details concerning the formation of Chapters within the Society.

Mr. Merrill reported upon conditions at the Baker Library.

Mr. Walker made some brief remarks on various matters connected with the conduct of his office.

Some interesting comments on the matter of stimulating interest among college and university students in railroad history were offered by Mr. Yungmeyer and Dr. Cole.

Mr. Merrill, Chairman of the Nominating Committee, then offered the following in nomination for the office of Directors of the Society:

George P. Becker
Dr. Arthur H. Cole
Charles E. Fisher
Walter R. Fogg
Harold D. Forsyth
H. Lincoln Harrison
John W. Merrill
Robert C. Schmid
Harold S. Walker
Rogers E. M. Whitaker
D. W. Yungmeyer

Upon voting, these members were found to be unanimously elected. The Annual Meeting was then adjourned.

Immediately following the Annual Meeting, the Directors met and elected the following officers, to hold office until the next Annual Meeting:

President	Charles E. Fisher
Vice President	D. W. Yungmeyer
Treasurer	George P. Becker
Secretary	Harold D. Forsyth
Financial Secretary	Harold S. Walker
Curator	John W. Merrill
Mid-West Resident V. P.	Roy L. Martin
Mid-West Representative	Alexander L. H. Darragh

The Directors adjourned at 4:00 P. M., thus affording those who wished to do so an opportunity to visit the rooms in the Baker Library.

HAROLD D. FORSYTH,
Secretary.

May 11th, 1950.

In Memory of

George W. Gerhard
Annual Member
824 Mills Building, San Francisco, Cal.
Who Died on January 15, 1950

Henry J. Klein
Annual Member
839 Linden Ave., Waterloo, Iowa
Who Died on January 3, 1950

William A. Ranke
Annual Member
P. O. Box 49, Illinois City, Illinois
Who Died on October 12, 1949

Walter W. St. Clair
Annual Member
202 North Serrano Ave., Los Angeles, California
Who Died on January 6, 1950

Col. Wm. J. Wilgus
Honorary Member
Claremont, New Hampshire
Who Died on October 24, 1949